



29 March, 1993

Mr. Tom McGoff
284 Washington Street
Barre, Vermont 05641

RE: Progress Report on the Remediation of Subsurface Petroleum Contamination.
McGoff's Sunoco, Barre, Vermont. VTDEC Site #90-0485

626

Dear Mr. McGoff:

Please find enclosed Griffin's Progress Report on the Remediation of Subsurface Petroleum Contamination at the above referenced site.

We have forwarded an additional copy of the report to Richard Spiese at the Vermont Department of Environmental Conservation.

Griffin is pleased to be conducting this work for you. If you have any question, please call.

Sincerely,

Christopher Hill
Christopher Hill
Hydrogeologist

Enclosure
cc Richard Spiese, VTDEC

**PROGRESS REPORT
ON THE REMEDIATION
OF
SUBSURFACE PETROLEUM CONTAMINATION**

**McGOFF'S SUNOCO
284 WASHINGTON STREET
BARRE, VERMONT**

**VTDEC SITE #90-0485
GRIFFIN JOB#10914132**

MARCH 1993

Prepared by:

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TABLE OF CONTENTS

	<u>PAGE</u>
Introduction	1
Treatment System Operation and Maintenance	1
Recovery Well Discharge Rates and Drawdown	2
Sampling of Recovery Well Water: Pre and Post Treatment	2
Soil Vent System Operation and Treatment of Soil Vent Air	3
Product Recovery Rates	3
Groundwater Sampling of Area Monitoring Wells	3
Conclusions	4
Recommendations	5

APPENDIX:

Remediation System Schematic	A1
Recovery Well Discharge Rates	A2
Groundwater Contour Map: November 1992	A3
Groundwater Contour Map: February 1993	A4
Liquid Level Monitoring Data	A5
BTEX and MTBE In Recovery Well Discharge	A6
BTEX and MTBE In Treated Groundwater	A7
PID Readings in Untreated Soil vent Air: MicroTIP PID	A8
PID Readings in Untreated Soil Vent Air: Hnu Model PID	A9
Indicated Petroleum Recovery Rates	A10-A11
BTEX and MTBE In Surrounding Monitoring Wells	A12-18
Laboratory Analyses Reports	

Introduction

This report summarizes the operation and maintenance of the groundwater and soil remediation systems installed at the McGoff's Sunoco Station in Barre, Vermont from mid-August 1992 through 15 March 1993. Progress of the remediation effort during the period is also discussed. Remediation efforts are being conducted to reduce and/or eliminate residual petroleum contamination in the subsurface. System installation and progress prior to August '92 are discussed in previous Griffin reports.

Treatment System Operation and Maintenance

A current system schematic appears on page A1 of the Appendix. All system elements are thoroughly inspected and maintained during Griffin's bi-weekly site visits. Routine maintenance of the soil vapor extraction system include the shutting down of the incinerator to remove water from the moisture trap and clean the debris filter. Incinerator operating temperatures before shut-down and after start-up are recorded. Photoionization detector (PID) measurements of incinerator influent and effluent are collected and recorded to document performance.

A new mercury standard vacuum gage was installed on the soil vent extraction system on 31 August 1992 and a line leak at the debris filter was repaired on 3 November 1992. The incinerator and above ground soil vent lines were insulated on 11 January 1993.

Routine maintenance of the groundwater recovery and treatment system includes the inspection and cleaning of the recovery well pump, and rotation of the liquid phase carbon drums. Ten liquid phase carbon drums were rotated through the system during the six month report period. Five spent carbon drums were removed from the site by Pollution Solutions on 4 February 1993. Water flowed freely to the recharge galleries during the period.

The water level control probes in the recovery well were lowered on 10 September 1992 to increase drawdown and the well's area of influence.

Recovery Well Discharge Rates and Drawdown

Average Daily discharge rates from the recovery well are tabulated and charted on page A2 of the Appendix. Recovery well discharge prior to lowering of the water level control probes was averaging just over 6,000 gallons per day (gpd). After lowering the control probes three feet on 10 September 1992, discharge from the recovery well increased to over 13,000 gpd. Discharge declined steadily to around 6,000 gpd from 18 September 1992 to 15 March 1993. The decline in discharge is attributed to a seasonal lowering of the water table.

The cone of depression resulting from recovery well discharge is illustrated on the two groundwater contour maps on pages A3 and A4 of the Appendix. These maps display data from 13 November 1992 and 18 February 1993. Supporting liquid level data is presented on page A5 of the Appendix. No free phase product accumulated in the recovery well during the period. The amount of liquid phase product equivalent being recovered through removal of dissolved phase contamination from the groundwater is negligible.

Sampling of Recovery Well Water: Pre and Post Treatment

To establish contaminant concentrations in groundwater being pumped from the recovery well, water samples are collected and analyzed to EPA Method 602. This data is tabulated and charted on page A6 of the Appendix. This data indicates that contaminant concentrations have declined significantly since the beginning of the report period. The total concentration of BTEX+MTBE in groundwater from the recovery well was 270 parts per billion (ppb) on the 2 March 1993 sampling date. Contaminant concentrations were below the Vermont Drinking water standards on 7 and 17 December 1992 and on 20 January and 18 February 1993. Benzene was the only compound present (11.1 ppb) above the drinking water standard (5.0 ppb) on the most recent sample date (2 March 1993).

Lab analyses of samples collected after treatment are presented on page A7 of the Appendix and indicate that the carbon adsorption drums reduced BTEX concentrations in discharged groundwater to non detect levels on all sample dates. MTBE broke through the carbon drums at concentrations below the Vermont Drinking water standards on four sample dates over the six month report period.

Soil Vent System Operation and Treatment Of Soil Vent Air

PID measurements are taken in air exiting the soil vapor extraction system to evaluate the concentration of volatile organic compounds (VOCs). PID measurements are also collected after incineration to document incinerator performance. PID measurements have been made with both Hnu model and MicroTIP PID's. PID data is presented on pages A8 and A9 of the Appendix.

Data from both model PIDs indicate elevated concentrations of VOCs still flowing from the soil vapor extraction system. Data collected with the Hnu Model PID indicates concentrations of approximately 150 ppm while MicroTIP readings indicate stabilized concentrations ranging from 256 to 868 ppm over the last six months. The best fit trend curves for the data from both PIDs both indicate declining hydrocarbon concentrations. A more significant decline in contaminant concentrations is indicated by the MicroTIP PID, which experience suggests is more sensitive at higher contaminant concentrations. The declining contaminant concentrations indicated by the decreasing PID data suggest that residual petroleum contamination in the vicinity of the soil vent system is being reduced.

Vacuum measurements in the soil vapor extraction system indicate a flow rate of approximately 40 cubic feet per minute. This flow rate is developed from the rating curve for the blower which draws air through the system.

Product Recovery Rates

Product recovery rates from the soil vent system are estimated using the manufacturer's (Falmouth Products) recommended method. By using the temperature differentials recorded from the Falco 100 incinerator and the air flow rates through the soil vent system, product recovery rates can be estimated. System operating temperatures and flow rates are recorded during the bi-weekly site visits. Using this data, Griffin estimates a current recovery rate of approximately 0.8 gallons per day (liquid phase equivalent). Total recovery to date is near 470 gallons. Indicated recovery rates are charted and tabulated on pages A10 and A11.

Groundwater Sampling of Area Monitoring Wells

Groundwater samples are collected from surrounding monitoring wells periodically to document groundwater conditions at the site. All groundwater quality data is tabulated and charted on page A12 to A18 of the Appendix. Contaminant concentrations are non-detect or below Vermont

drinking water standards in monitoring wells 1, 2, 5 and 6. Groundwater quality improved in the vicinity of MW3 from 17 June 1992 to 17 December 1992. Contaminant concentrations in MW3 increased significantly on the 20 January 1993 sampling event.

On 13 November 1992, 0.61 feet of free phase product was detected in MW4. Measured product thickness in MW4 increased to 1.68 feet by the 18 February site visit.

Conclusions

Based on the data collected from the operation of the remediation system at McGoff's Sunoco during this report period, Griffin has reached the following conclusions:

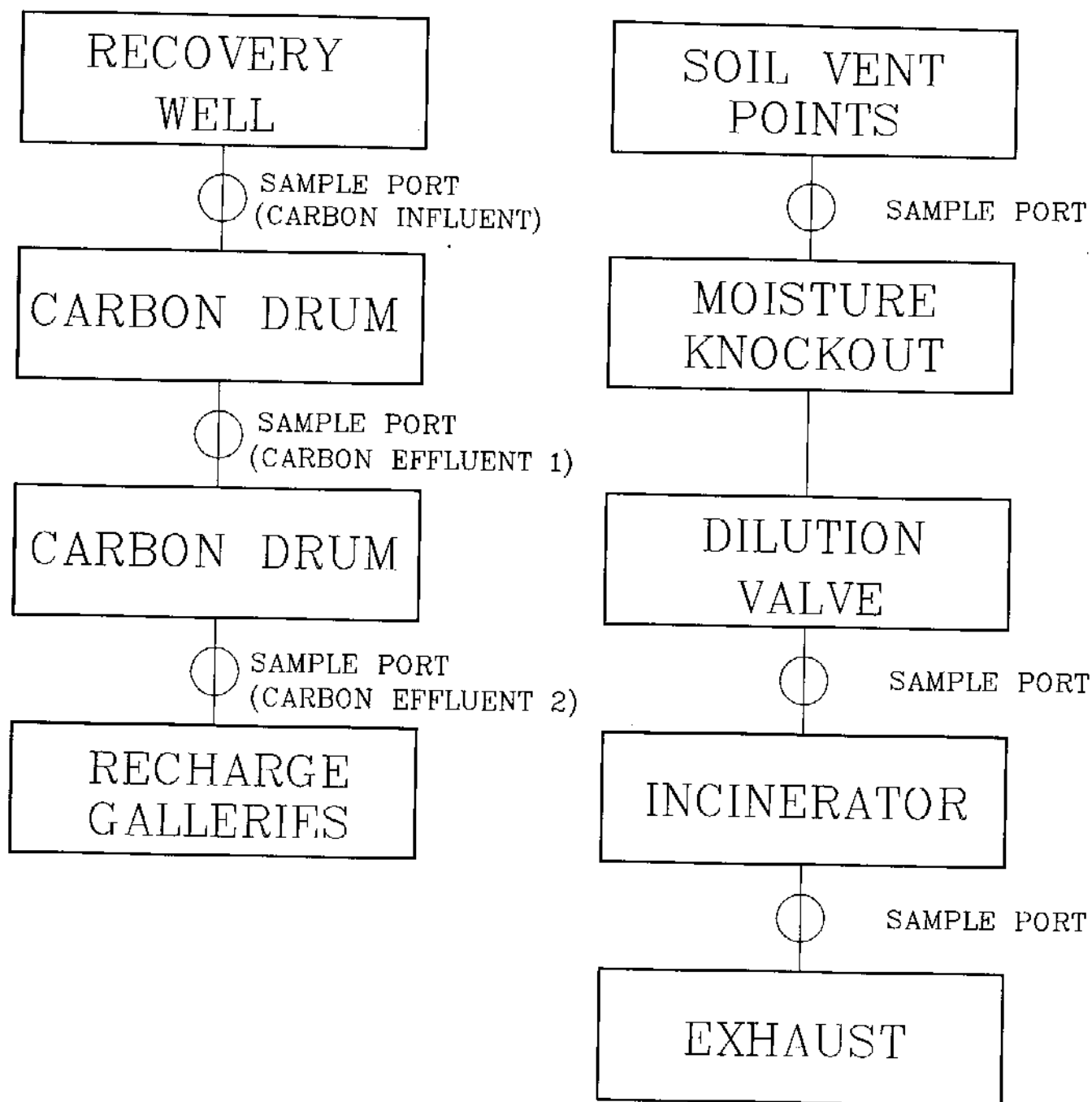
- 1) The groundwater recovery well has been discharging between six and thirteen thousand gallons per day. This flow rate has maintained a drawdown of approximately three to five feet and a radius of influence of approximately ten to twenty feet as indicated by the water level data from surrounding monitoring wells.
- 2) Contaminant concentrations in groundwater pumped from the recovery well decreased significantly over the report period, and were below Vermont drinking water standards on four recent sample dates. No free phase product was detected in the recovery well during the report period.
- 3) Data collected during operation of the catalytic incinerator indicate that approximately 0.8 gallons (liquid phase equivalent) of free phase product are being recovered from the soil vapor extraction system daily. Recovery rates from the system are decreasing as product is removed from the subsurface. However, elevated PID readings and the currently indicated recovery rate suggest that appreciable additional product can be recovered through operation of the soil vapor extraction system. Operational data indicates that approximately 470 gallons of liquid phase equivalent product have been recovered from the soil vapor extraction system since start-up.
- 4) Free phase product has accumulated in downgradient MW4 and indicates that some residual free phase product still exists beneath portions of the site.
- 5) The remediation system has been operating properly and no major repairs were required during the report period.

Recommendations

Based on data gathered from operation of the remediation system during this report period Griffin recommends the following:

- 1) Since the soil vent system continues to liberate significant concentrations of adsorbed VOCs from the vadose zone, continued operation of this system is recommended.
- 2) Since contaminant concentrations in the groundwater discharged from the recovery well have decreased to near or below Vermont drinking water standards, and since no free phase product has been detected in the recovery well, Griffin recommends turning off this portion of the remediation system. The recovery well can continue to be used for water level data and can be monitored free phase product during site visits.
- 3) Free phase product in MW4 should be recovered through manual bailing and stored on-site in an appropriate container. Records of observed product thickness before and after bailing, and the amount of product recovered should be maintained. Griffin should be able to accomplish this during scheduled site visits. Since MW4 is located in the traveled portion of Route 302, two people will be required to safely accomplish this task.

APPENDIX



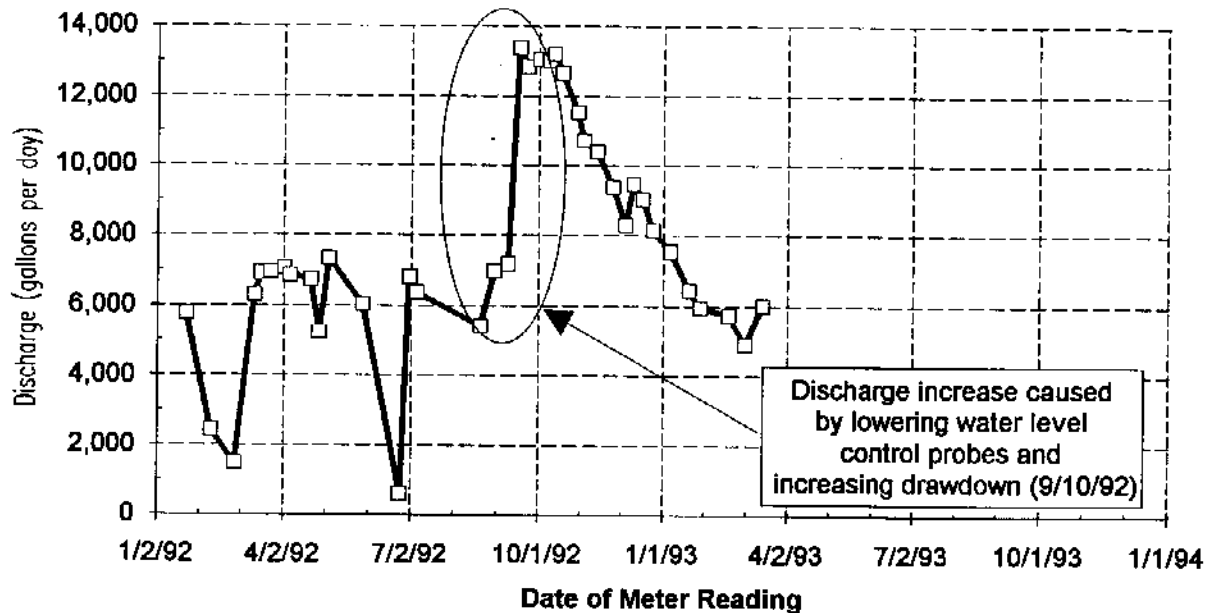
REMEDIATION SYSTEM SCHEMATIC

RAY JACOB'S SUNOCO
(FORMERLY McGOFF'S)
BARRE, VERMONT

UPDATED: 3/24/93
PROJECT #10914132
GRIFFIN INTERNATIONAL, INC.

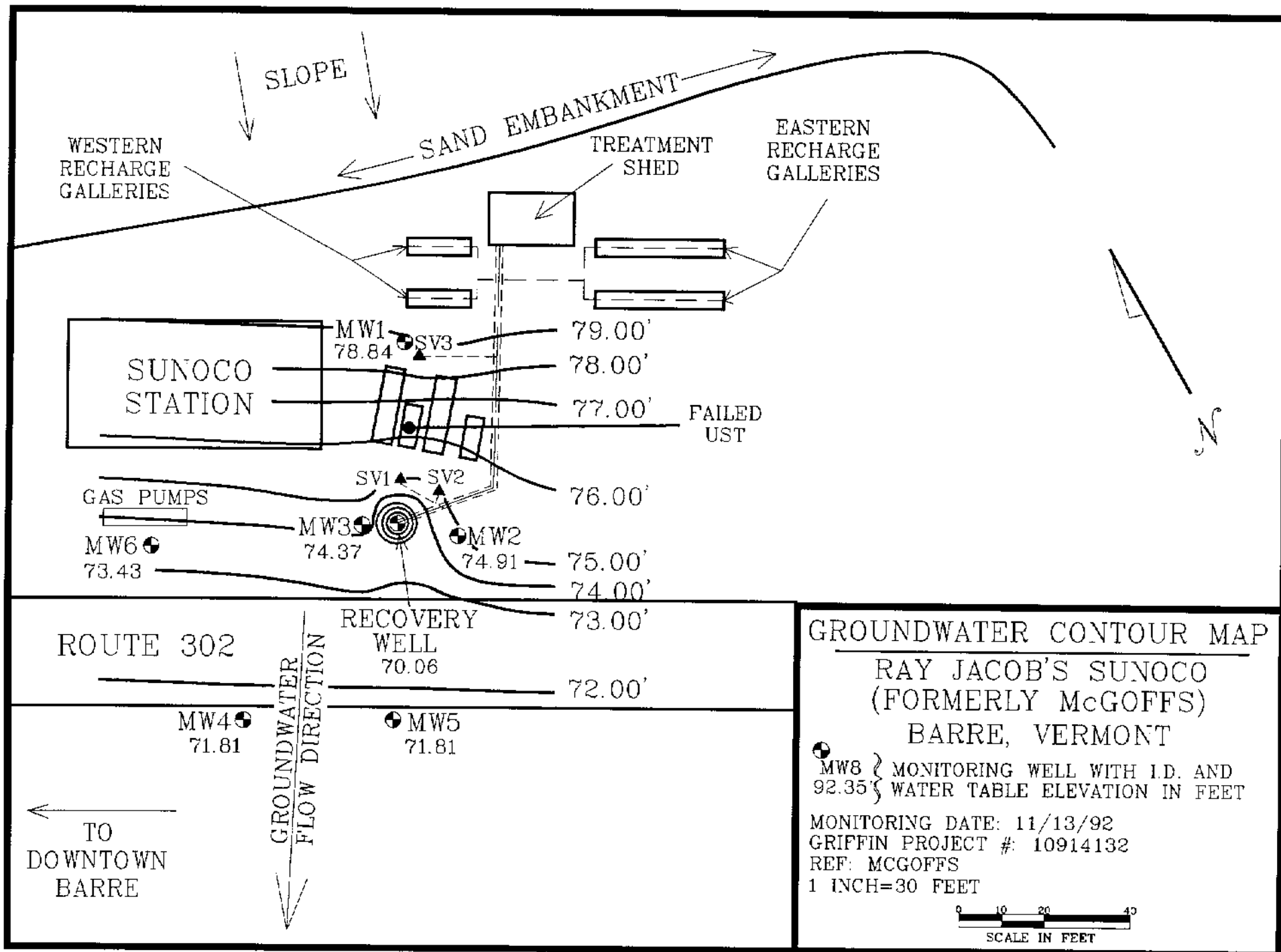
**Jacob's Sunoco (Formerly McGoff's)
Barre, Vermont**

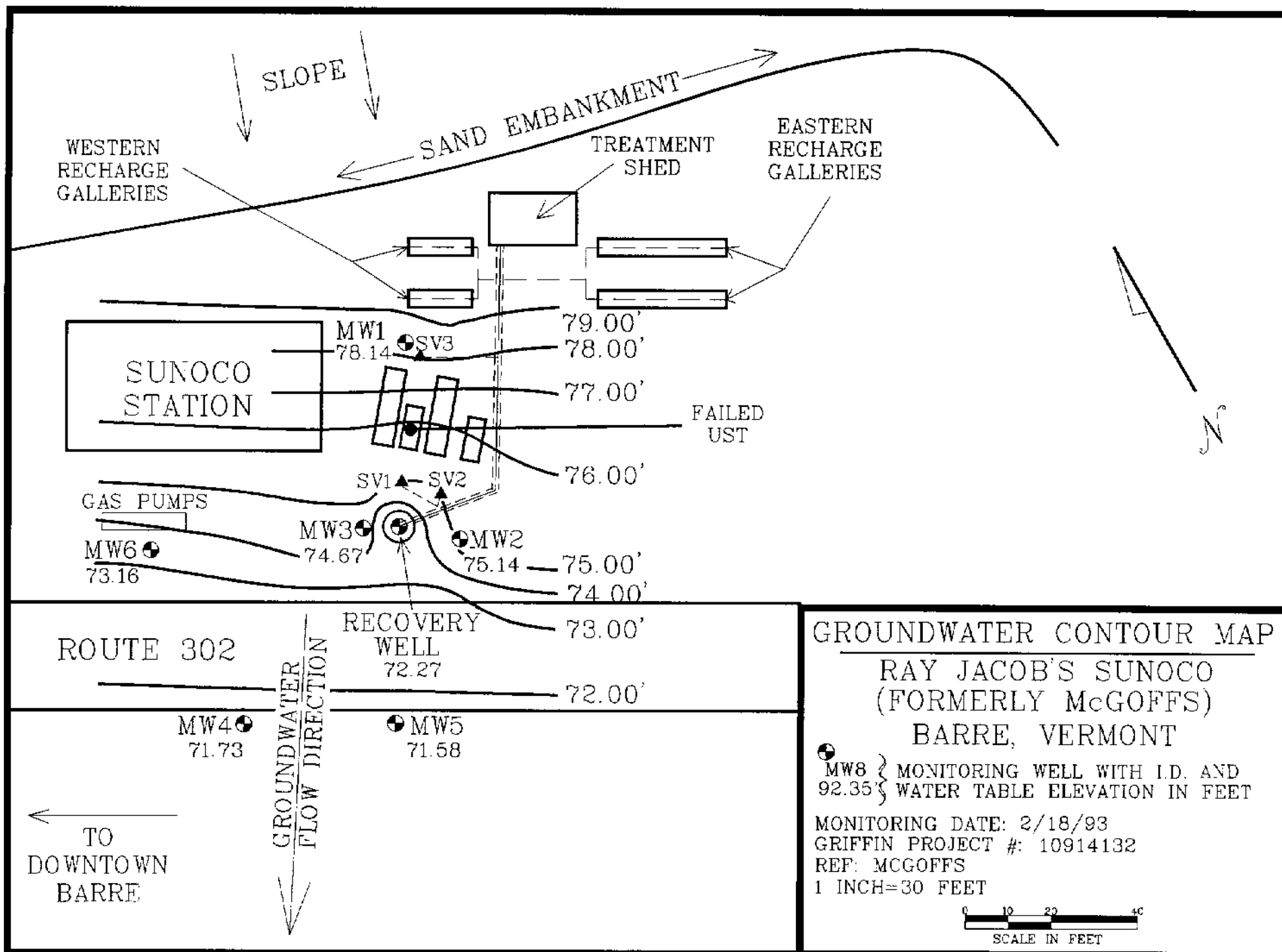
Average Daily Recovery Well Discharge Rates



DATE	METER (gallons)	Delta Days	Delta Gallons	FLOW (gal/day)	FLOW (gal/min)
8/26/92	978,537	5			
8/31/92	1,013,385	5	34,848	6,970	4.84
9/10/92	1,085,076	10	71,691	7,169	4.98
9/18/92	1,192,055	8	106,979	13,372	9.29
9/24/92	1,268,968	6	76,913	12,819	8.90
10/2/92	1,373,364	8	104,396	13,050	9.06
10/9/92	1,464,475	7	91,111	13,016	9.04
10/13/92	1,517,282	4	52,807	13,202	9.17
10/19/92	1,593,130	6	75,848	12,641	8.78
10/30/92	1,719,983	11	126,853	11,532	8.01
11/3/92	1,762,774	4	42,791	10,698	7.43
11/13/92	1,866,735	10	103,961	10,396	7.22
11/25/92	1,979,004	12	112,269	9,356	6.50
12/4/92	2,053,660	9	74,656	8,295	5.76
12/10/92	2,110,297	6	56,637	9,440	6.56
12/17/92	2,173,431	7	63,134	9,019	6.26
12/24/92	2,230,333	7	56,902	8,129	5.65
1/6/93	2,328,389	13	98,056	7,543	5.24
1/20/93	2,418,460	14	90,071	6,434	4.47
1/28/93	2,466,001	8	47,541	5,943	4.13
2/18/93	2,586,523	21	120,522	5,739	3.99
3/2/93	2,645,215	12	58,692	4,891	3.40
3/15/93	2,723,391	13	78,176	6,014	4.18

Discharge Rates reported in gallons





Ray Jacob's Sunoco (Formerly McGoff's)
Liquid Level Monitoring Data
13-Nov-92

Well I.D.	Well Depth	Top of Casing Elevation	Depth To Product	Depth To Water	Product Thickness	Specific Gravity Of Product	Hydro Equivalent	Corrected Depth To Water	Corrected Water Table Elevation
MW-1	-	100.00	-	21.16	-	-	-	-	78.84
MW-2	-	97.66	-	22.75	-	-	-	-	74.91
MW-3	-	98.34	-	23.97	-	-	-	-	74.37
MW-4	-	98.67	26.79	27.40	0.61	0.88	0.54	26.86	71.81
MW-5	-	98.63	-	26.82	-	-	-	-	71.81
MW-6	-	99.56	-	26.13	-	-	-	-	73.43
R/W	-	96.69	-	26.63	-	-	-	-	70.06

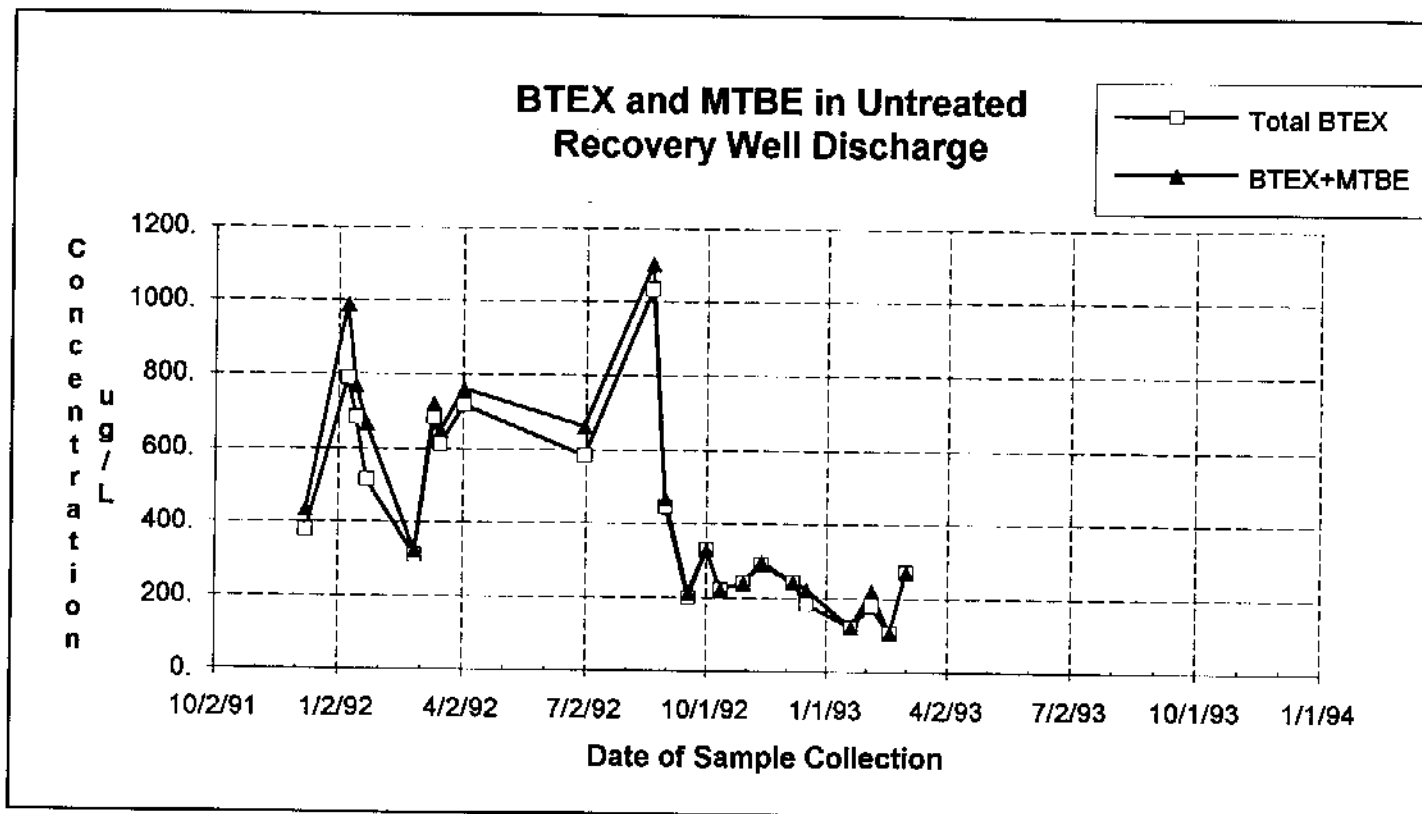
All Values Reported in Feet

Ray Jacob's Sunoco (Formerly McGoff's)
Liquid Level Monitoring Data
18-Feb-93

Well I.D.	Well Depth	Top of Casing Elevation	Depth To Product	Depth To Water	Product Thickness	Specific Gravity Of Product	Hydro Equivalent	Corrected Depth To Water	Corrected Water Table Elevation
MW-1	-	100.00	-	21.86	-	-	-	-	78.14
MW-2	-	97.66	-	22.52	-	-	-	-	75.14
MW-3	-	98.34	-	23.67	-	-	-	-	74.67
MW-4	-	98.67	26.74	28.42	1.68	0.88	1.48	26.94	71.73
MW-5	-	98.63	-	27.05	-	-	-	-	71.58
MW-6	-	99.56	-	26.40	-	-	-	-	73.16
R/W	-	96.69	-	24.42	-	-	-	-	72.27

All Values Reported in Feet

Groundwater Quality Summary
Ray Jacob's (Formerly McGoff's) Sunoco
Barre, Vermont



Recovery Well

PARAMETER	Date of Sample Collection									
	10/2/92	10/13/92	10/30/92	11/13/92	12/7/92	12/17/92	1/20/93	2/4/93	2/18/93	3/2/93
Benzene	36.9	28.9	20.5	20.5	5.1	TBQ	ND	7.5	ND	11.1
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DCB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-DCB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DCB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	5.5	5.5	ND	ND	ND	5.0	ND	TBQ
Toluene	184.	125.	127.	166.	151.	118.	74.	88.5	63.8	158.0
Xylenes	109.	67.7	87.5	98.0	87.1	67.1	48.4	79.5	43.5	101.0
Total BTEX	330.	222.	241.	290.	243.	185.	123.	181.	107.	270.
MTBE	TBQ	ND	ND	6.0	TBQ	39.1	ND	38.5	ND	ND
BTEX+MTBE	330.	222.	241.	296.	243.	224.	123.	219.	107.	270.

All values reported in ug/L (ppb)

ND - None Detected

**Groundwater Quality Summary
Jacob's Sunoco (Formerly McGoff's)
Barre, Vermont**

**BTEX and MTBE In Treated Groundwater
(After second Carbon Drum)**

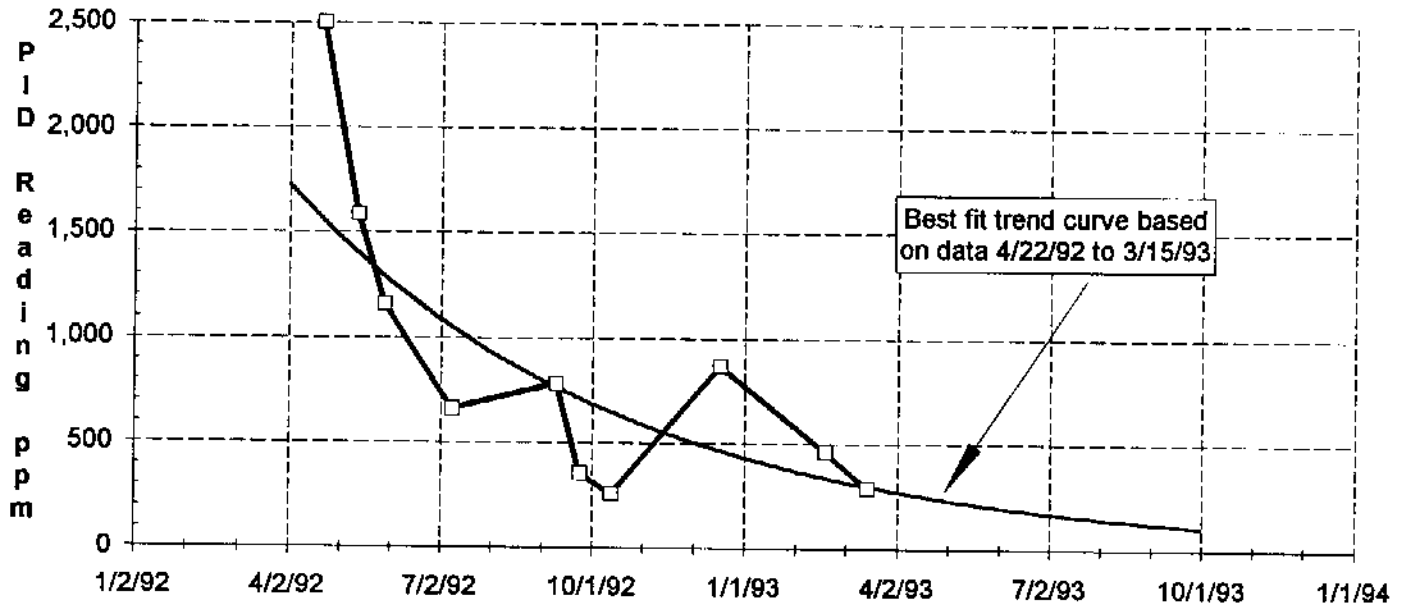
PARAMETER	Date of Sample Collection												
	8/21/92	8/31/92	9/18/92	10/2/92	10/13/92	10/30/92	11/13/92	12/7/92	12/17/92	1/20/93	2/4/93	2/18/93	3/2/93
Benzene	ND	ND	ND	ND	1.3	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DCB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-DCB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DCB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total BTEX	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ND	ND	16.3	ND	ND	2.2	4.7	TBQ	ND	ND	ND	ND	ND
BTEX+MTBE	ND	ND	16.3	ND	ND	2.2	4.7	TBQ	ND	ND	ND	ND	ND

All Values Reported in parts per billion (ppb)

ND - None Detected

**Ray Jacob's Sunoco (Formerly McGoff's)
Barre, Vermont**

**PID Readings in Untreated
Soil Vent Air: MicroTIP PID**



MicroTIP PID Data

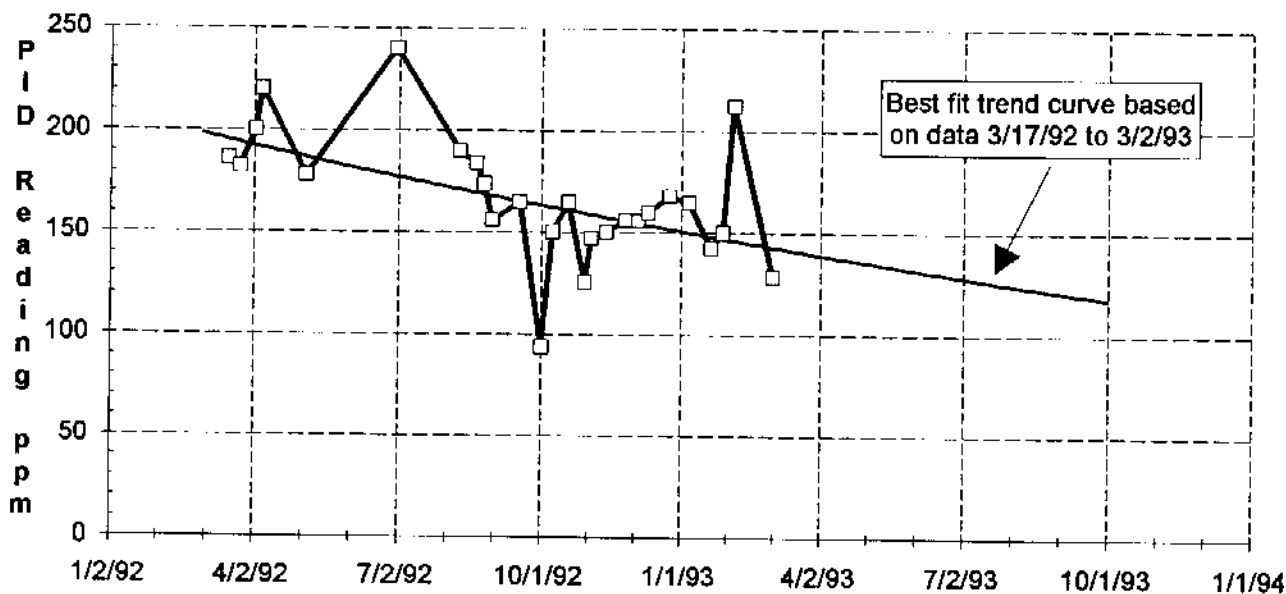
Date of Measurement	Pre-Incineration PID Reading	Post-Incineration PID Reading
4/22/92	> 2,500	19.3
5/13/92	1,585	6.5
5/29/92	1,157	8.0
7/9/92	662	90.2
8/5/92	850	1.0
8/6/92	1900	0.3
9/10/92	784	5.0
9/24/92	356	0.0
10/13/92	256	0.7
12/17/92	868	0.0
2/18/93	460	0.0
3/15/93	287	2.7

PID readings reported in parts per million (ppm) and collected with Photovac Model HL2000 PID

PID Calibrated with isobutylene and referenced to benzene

**Ray Jacob's Sunoco (formerly McGoff's)
Barre, Vermont**

**PID Readings In Untreated
Soil Vent Air: Hnu Model PID**



Hnu PID Data

Date	Pre-Incineration PID Reading	Post-Incineration PID Reading
3/17/92	188	3.6
3/24/92	182	2.1
9/18/92	165	0.0
10/2/92	94	0.4
10/9/92	150	0.0
10/19/92	165	0.0
10/30/92	125	0.0
11/3/92	147	0.4
11/13/92	150	0.6
11/25/92	156	1.2
12/4/92	156	0.2
12/10/92	160	0.4
12/24/92	168	0.5
1/6/93	165	0.0
1/20/93	142	0.6
1/28/93	150	1.8
2/4/93	212	0.0
3/2/93	128	0.2

PID readings reported in parts per million (ppm) and collected with HNU Model PI101 PID

PID Calibrated with isobutylene and referenced to benzene

**Indicated Petroleum Recovery Rates
Jacob's Sunoco (Formerly McGoff's)
Barre, Vermont**

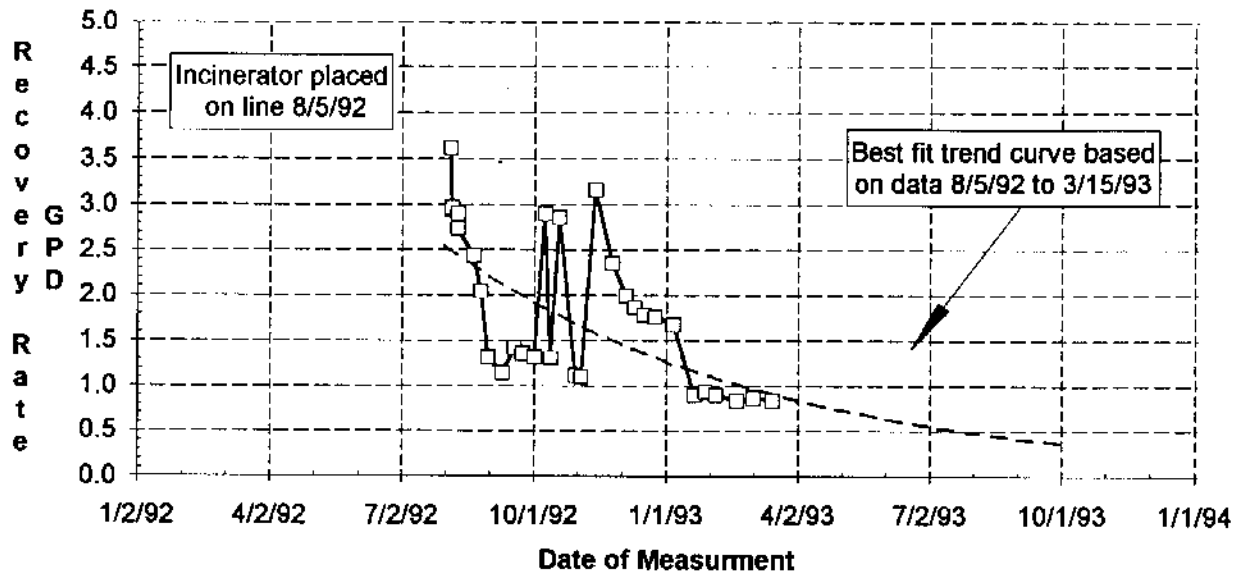
Date	T1 (C)	T2 (C)	Delta T T2-T1 (C)	System Vacuum (inches Hg)	Air Flow Rate (CFM)	Product Recovery Rate (gpd)	Total Recovery To Date**
8/5/92	339	474	135	28*	62	3.6	116.0
8/6/92	350	476	126	34*	54	2.9	118.9
8/6/92	387	559	172	-	40	3.0	118.9
8/10/92	338	484	146	38*	46	2.9	130.5
8/10/92	348	506	158	-	40	2.7	130.5
8/21/92	340	488	148	43.5*	38	2.4	157.3
8/26/92	330	454	124	43*	38	2.0	167.4
8/31/92	330	452	122	3.5	25	1.3	174.0
9/10/92	330	435	105	3.5	25	1.1	185.4
9/18/92	329	460	131	3.5	25	1.4	196.7
9/24/92	330	456	126	3.5	25	1.4	204.9
10/2/92	331	453	122	3.5	25	1.3	215.4
10/9/92	331	453	122	2.5	55	2.9	235.7
10/13/92	331	452	121	3.5	25	1.3	240.9
10/19/92	330	446	116	2.4	57	2.9	258.1
10/30/92	330	433	103	3.5	25	1.1	270.3
11/3/92	330	431	101	3.5	25	1.1	274.7
11/13/92	356	526	170	3.0	43	3.2	306.2
1/20/93	329	412	83	3.5	25	0.9	422.7
1/28/93	330	416	86	3.5	25	0.9	430.1
2/4/93	331	414	83	3.5	25	0.9	436.4
2/18/93	330	407	77	-	25	0.8	448.0
3/2/93	330	409	79	3.8	25	0.9	458.2
3/15/93	331	408	77	3.5	25	0.8	469.1

* - Water Standard vacuum measurement

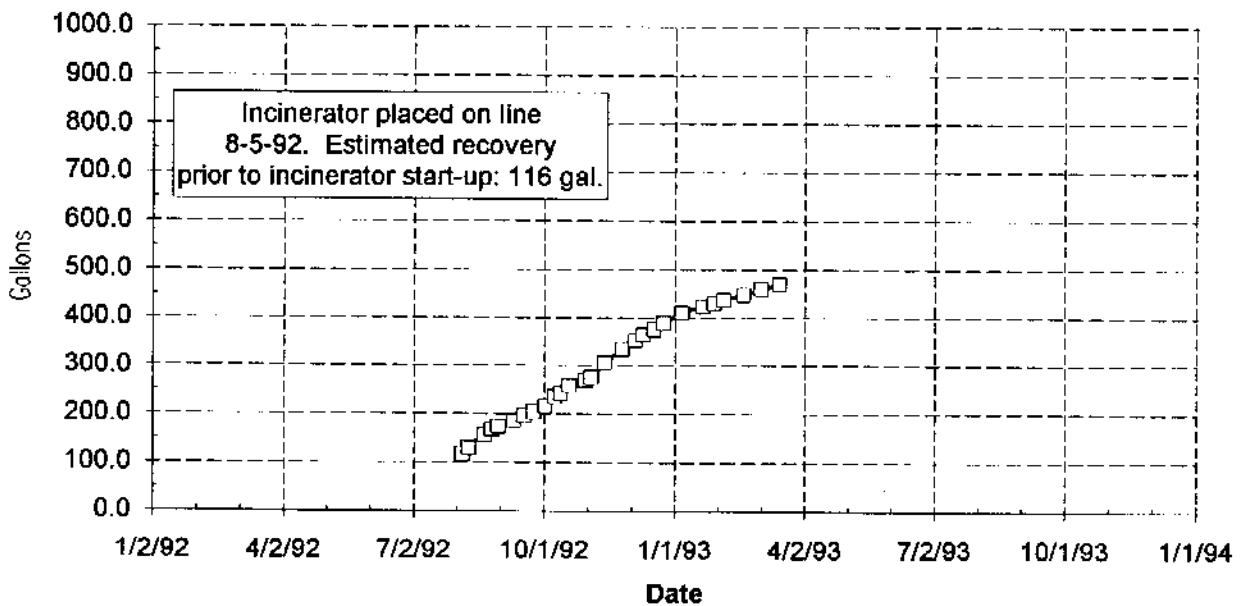
* - Based on current recovery rates plus estimated recovery prior to installation of catalytic incinerator

Recovery rate: (delta T) x (Flow Rate) x (0.000424 (conversion factor))

Indicated Petroleum Recovery Rate from Soil Vapor Extraction System



Total Indicated Petroleum Recovery To Date

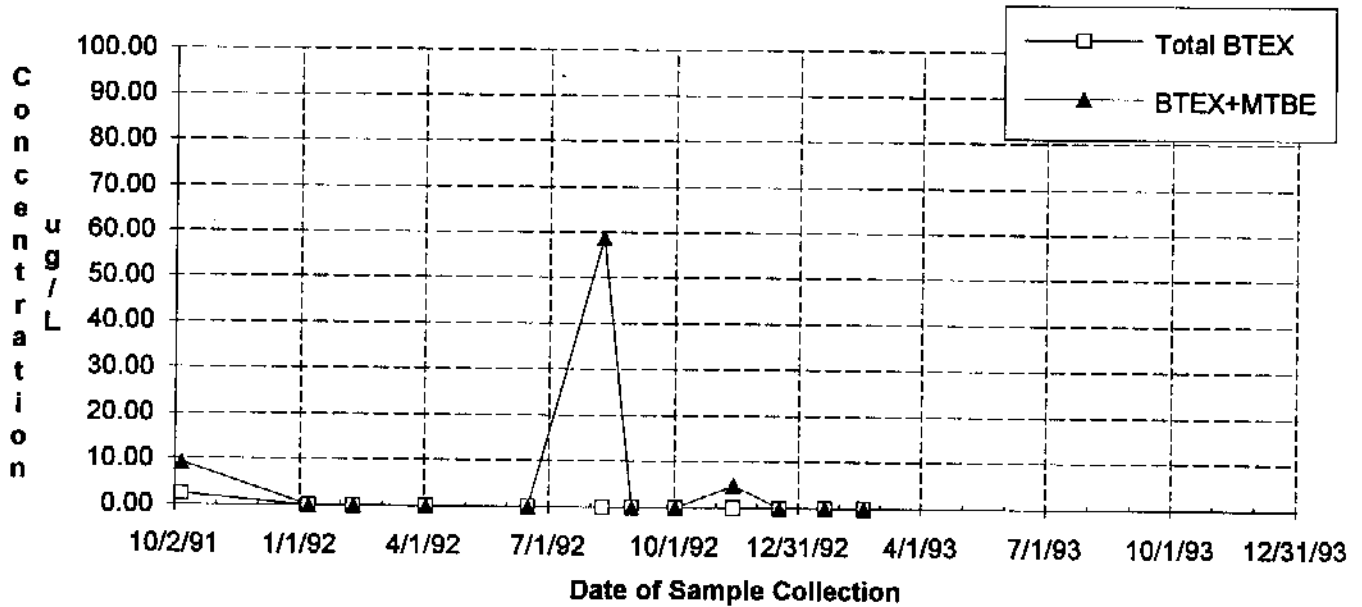


Petroleum Recovery Rates are estimated using temperature data from the catalytic incinerator. An air flow rate through the soil vapor extraction system of 40 cubic feet per minute is assumed based on rating curve data for the system blower.

$$\text{Recovery rate} = (\Delta T \times \text{Flow Rate} \times 0.000424 \text{ (Conversion Factor)})$$

Groundwater Quality Summary
Ray Jacob's (Formerly McGoff's) Sunoco
Barre, Vermont

BTEX and MTBE in MW-1



Monitoring Well 1

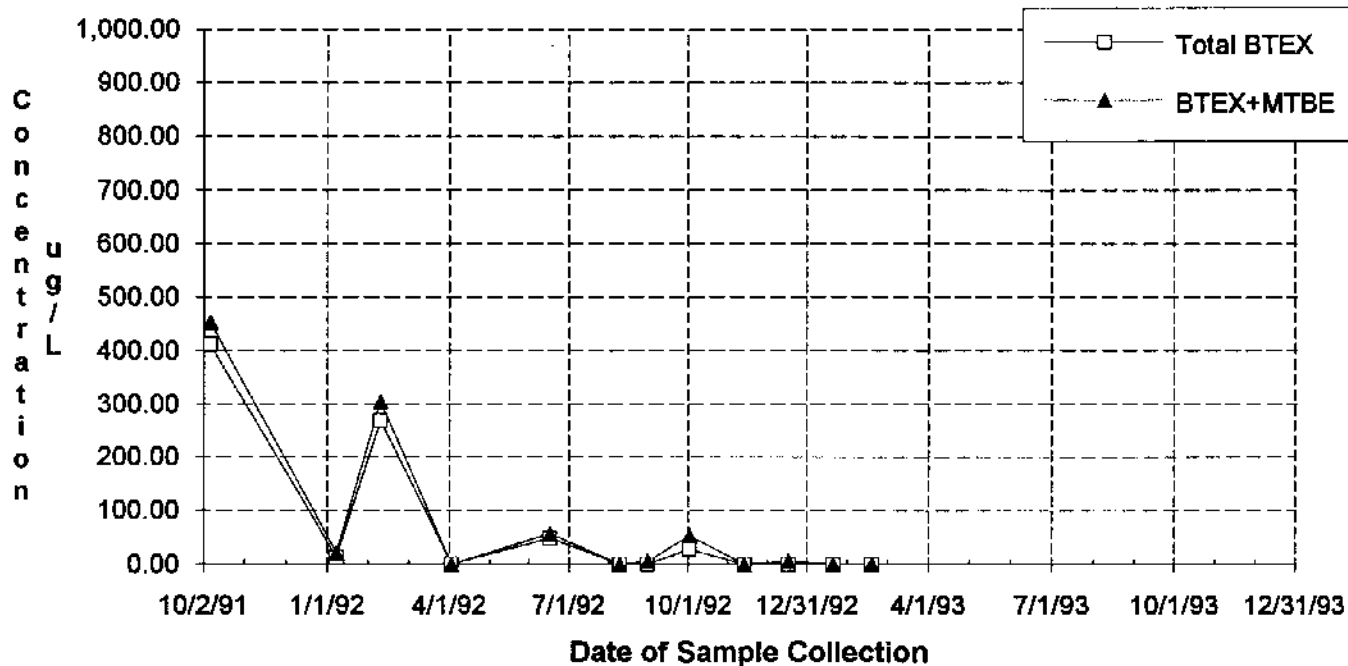
PARAMETER	Date of Sample Collection									
	2/10/92	4/3/92	6/17/92	8/10/92	8/31/92	10/2/92	11/13/92	12/17/92	1/20/93	2/18/93
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DCB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-DCB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DCB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total BTEX	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ND	ND	ND	58.7	ND	ND	4.8	ND	ND	ND
BTEX+MTBE	ND	ND	ND	58.7	ND	ND	4.8	ND	ND	ND

All values reported in ug/L (ppb)

ND - None Detected

Groundwater Quality Summary
Ray Jacob's (Formerly McGoff's) Sunoco
Barre, Vermont

BTEX and MTBE in MW-2



Monitoring Well 2

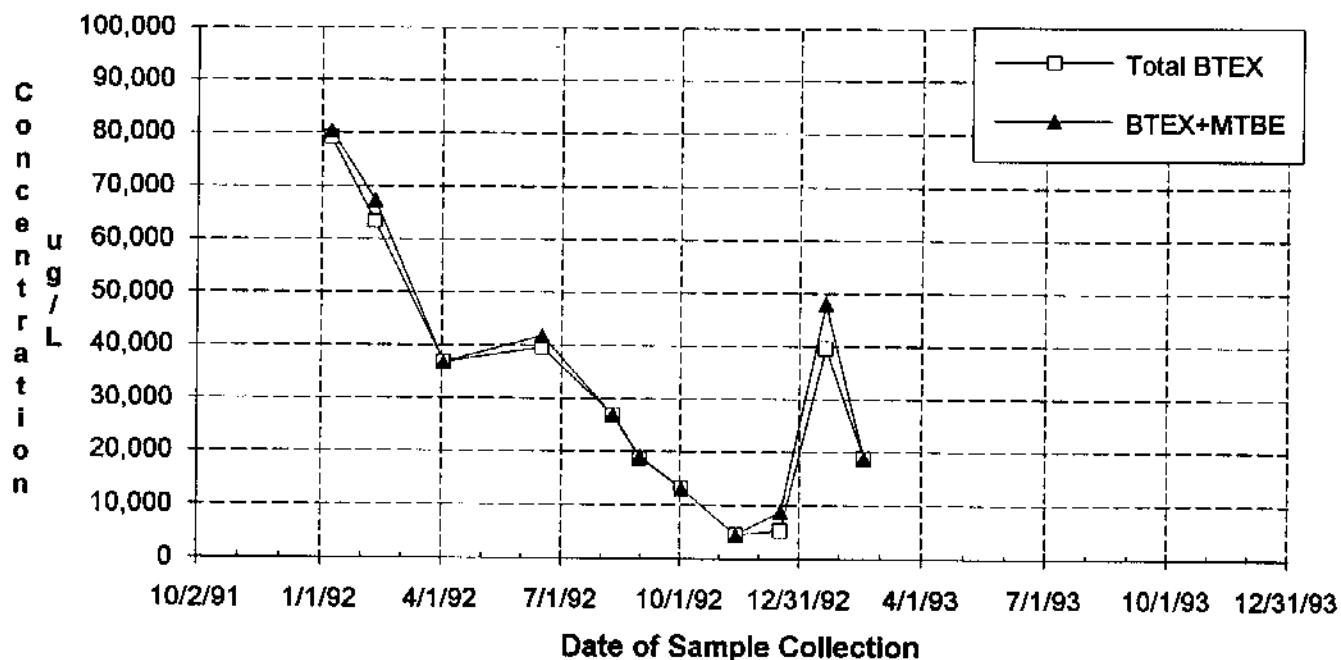
PARAMETER	Date of Sample Collection									
	2/10/92	4/3/92	6/17/92	8/10/92	8/31/92	10/2/92	11/13/92	12/17/92	1/20/93	2/18/93
Benzene	43.6	ND	12.3	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DCB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-DCB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DCB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	7.71	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	70.8	ND	12.4	ND	ND	6.8	ND	ND	ND	ND
Xylenes	146.	ND	23.5	ND	ND	20.8	ND	ND	ND	ND
Total BTEX	268.	ND	48.2	ND	ND	27.6	ND	ND	ND	ND
MTBE	36.	TBQ	8.0	ND	5.1	25.7	ND	5.1	ND	ND
BTEX+MTBE	304.	TBQ	56.2	ND	5.1	53.3	ND	5.1	ND	ND

All values reported in ug/L (ppb)

ND - None Detected

Groundwater Quality Summary
Ray Jacob's (Formerly McGoff's) Sunoco
Barre, Vermont

BTEX and MTBE in MW-3



Monitoring Well 3

PARAMETER	Date of Sample Collection									
	2/10/92	4/3/92	6/17/92	8/10/92	8/31/92	10/2/92	11/13/92	12/17/92	1/20/93	2/18/93
Benzene	15,500.	6,490.	8,360.	5,660.	3,080.	543.	150.	237.	4,890.	1,010.
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DCB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-DCB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DCB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	2,660.	1,680.	1,800.	1,070.	753.	730.	220.	TBQ	1,500.	725.
Toluene	28,400.	17,900.	18,800.	13,300.	9,500.	5,010.	1,440.	3,120.	22,900.	11,500.
Xylenes	16,800.	10,800.	10,700.	7,010.	5,310.	6,820.	2,690.	2,000.	10,300.	5,620.
Total BTEX	63,360.	36,870.	39,660.	27,040.	18,643.	13,103.	4,500.	5,367.	39,690.	18,855.
MTBE	4,080.	ND	2,140.	ND	510.	TBQ	ND	3,410.	8,320.	ND
BTEX+MTBE	67,440.	36,870.	41,800.	27,040.	19,153.	13,103.	4,500.	8,767.	47,910.	18,855.

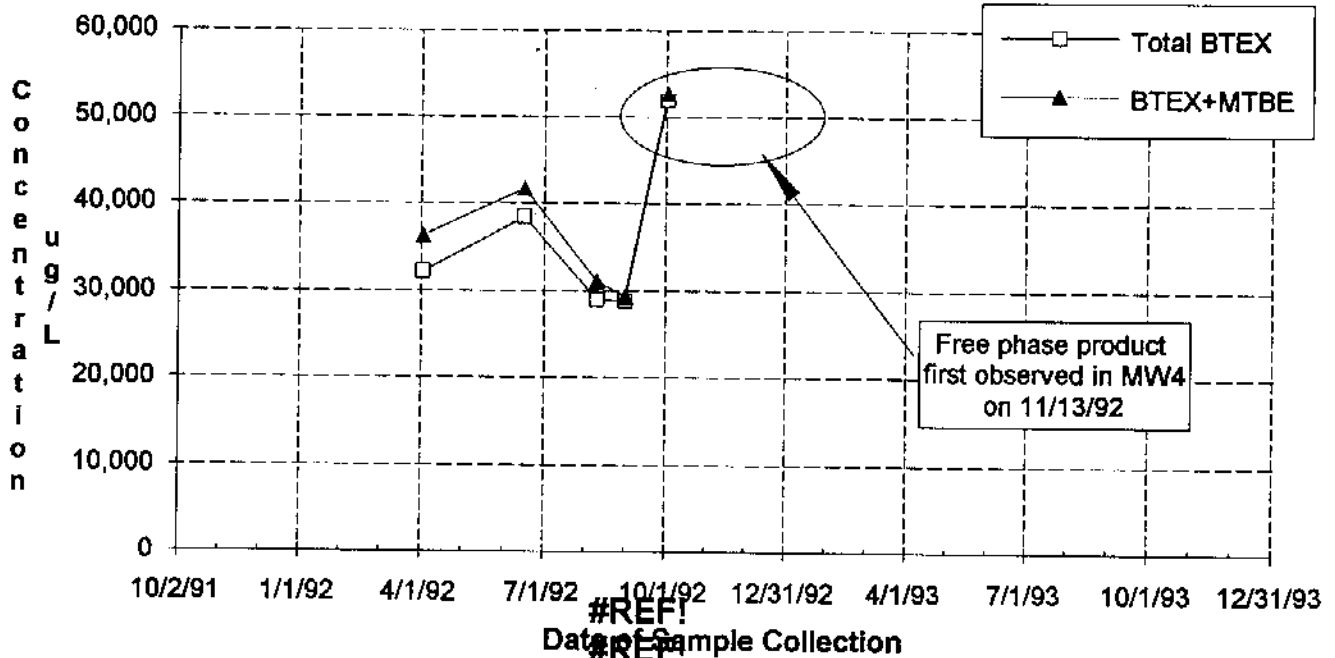
All values reported in ug/L (ppb)

ND - None Detected

FP - Free Product

Groundwater Quality Summary
Ray Jacob's (Formerly McGoff's) Sunoco
Barre, Vermont

BTEX and MTBE in MW-4



Monitoring Well 4

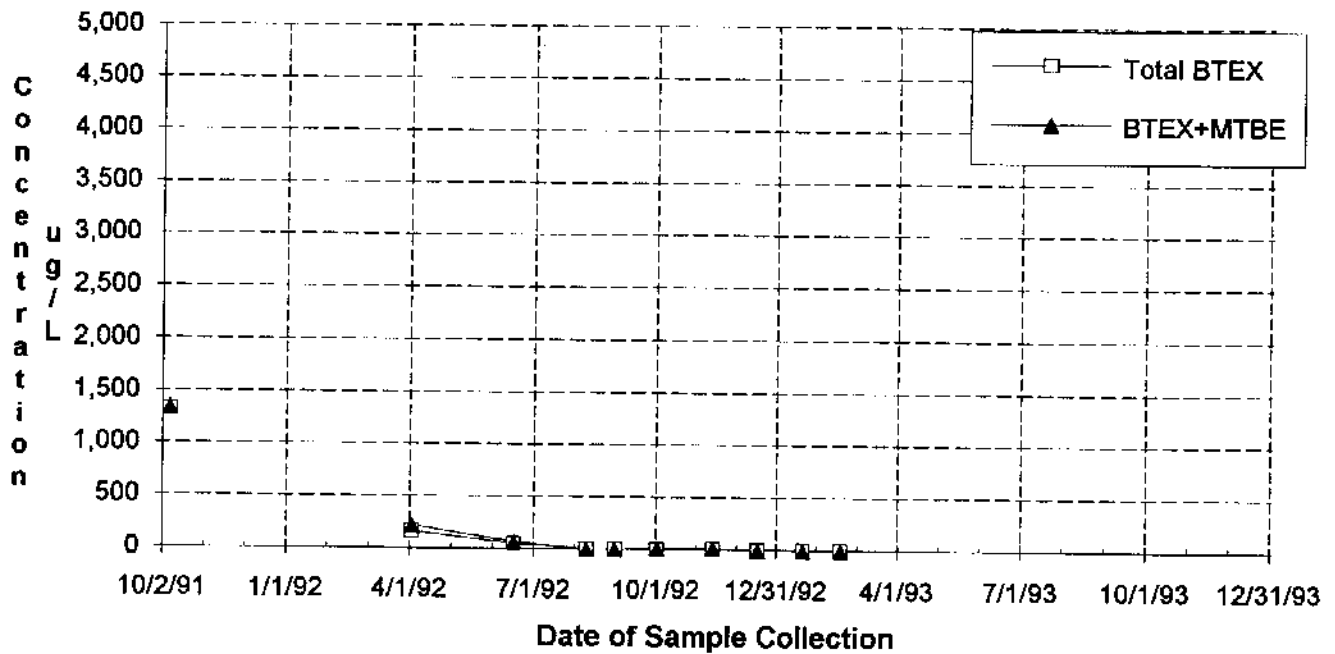
PARAMETER	Date of Sample Collection									
	2/10/92	4/3/92	6/17/92	8/10/92	8/31/92	10/2/92	11/13/92	12/17/92	1/20/93	2/18/93
Benzene	-	6,020.	8,160.	5,840.	6,060.	6,560.	FP/0.61'	FP/0.75'	FP/1.48'	FP/1.68'
Chlorobenzene	-	ND	ND	ND	ND	ND				
1,2-DCB	-	ND	ND	ND	ND	ND				
1,3-DCB	-	ND	ND	ND	ND	ND				
1,4-DCB	-	ND	ND	ND	ND	ND				
Ethylbenzene	-	1,600.	1,780.	1,250.	1,090.	2,900.				
Toluene	-	14,800.	17,500.	13,800.	13,900.	22,300.				
Xylenes	-	9,780.	11,000.	8,160.	7,760.	20,200.				
Total BTEX		32,200.	38,440.	29,050.	28,810.	51,960.				
MTBE		4,140.	3,260.	2,100.	594.	727.				
BTEX+MTBE		36340.	41700.	31150.	29404.	62687.				

All values reported in ug/L (ppb)

ND - None Detected

Groundwater Quality Summary
Ray Jacob's (Formerly McGoff's) Sunoco
Barre, Vermont

BTEX and MTBE in MW-5



Monitoring Well 5

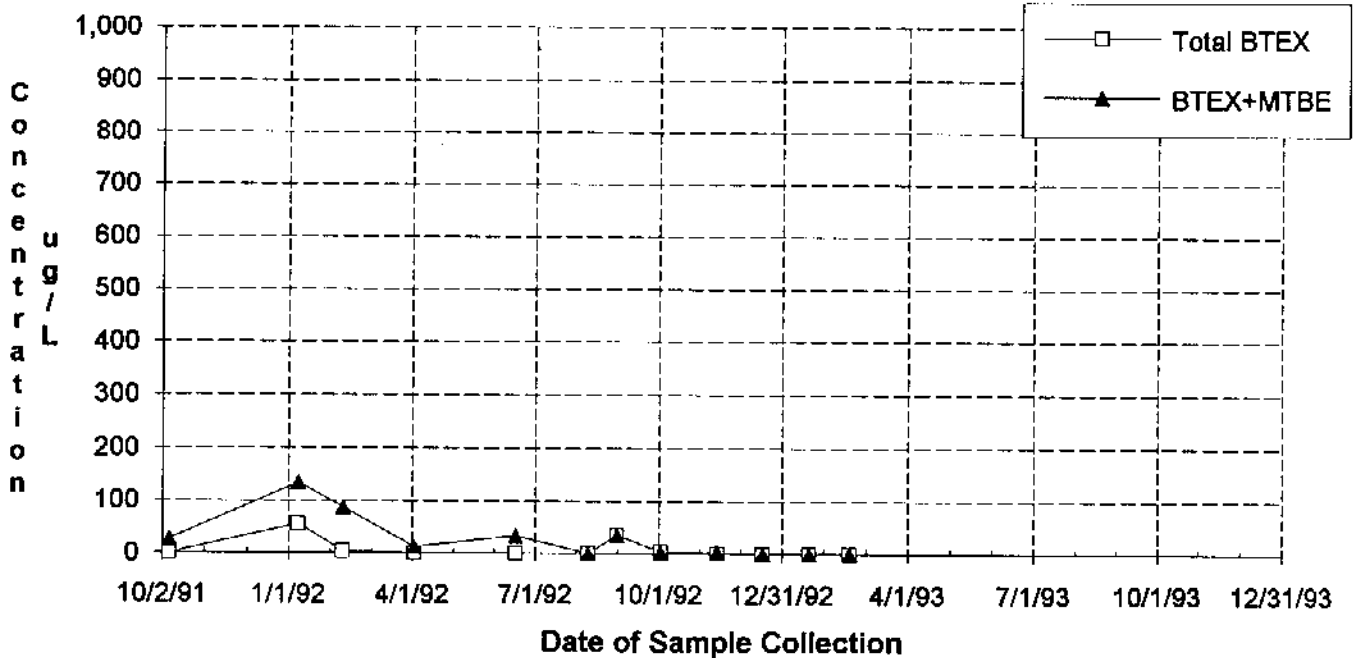
PARAMETER	Date of Sample Collection									
	2/10/92	4/3/92	6/17/92	8/10/92	8/31/92	10/2/92	11/13/92	12/17/92	1/20/93	2/18/93
Benzene	-	9.4	TBQ	ND	ND	ND	1.1	ND	ND	ND
Chlorobenzene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DCB	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-DCB	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DCB	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	-	6.2	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	-	45.6	14.7	ND	ND	ND	TBQ	ND	ND	ND
Xylenes	-	104.	34.	ND	ND	ND	2.0	ND	ND	ND
Total BTEX		165.	49.	ND	ND	ND	3.1	ND	ND	ND
MTBE		54.5	21.0	ND	ND	12.5	13.6	TBQ	ND	TBQ
BTEX+MTBE		220.	70.	ND	ND	12.5	16.7	TBQ	ND	TBQ

All values reported in ug/L (ppb)

ND - None Detected

Groundwater Quality Summary
Ray Jacob's (Formerly McGoff's) Sunoco
Barre, Vermont

BTEX and MTBE in MW-6



Monitoring Well 6

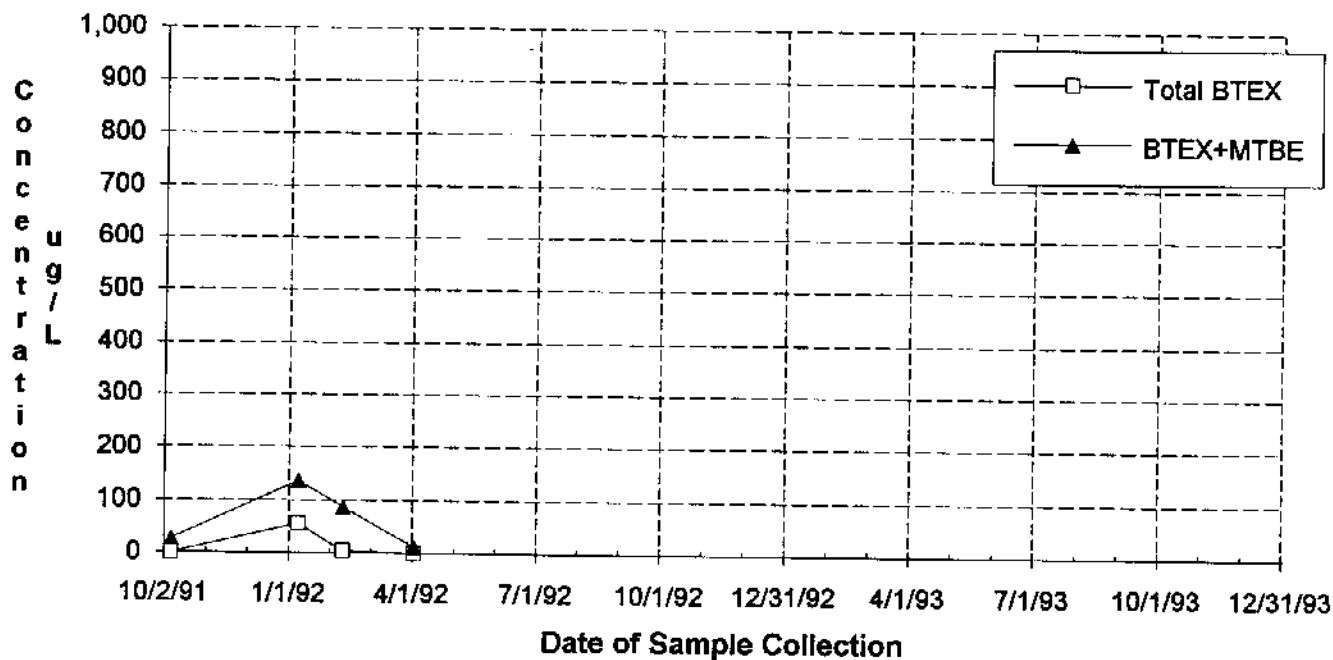
PARAMETER	Date of Sample Collection									
	2/10/92	4/3/92	6/17/92	8/10/92	8/31/92	10/2/92	11/13/92	12/17/92	1/20/93	2/18/93
Benzene	ND	ND	ND	ND	5.1	3.6	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DCB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-DCB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DCB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	3.60	TBQ	TBQ	ND	20.5	ND	ND	ND	ND	ND
Xylenes	ND	ND	ND	ND	9.4	ND	ND	ND	ND	ND
Total BTEX	3.60	TBQ	TBQ	ND	35.0	3.6	ND	ND	ND	ND
MTBE	84.1	12.4	34.3	ND	ND	TBQ	3.5	ND	ND	ND
BTEX+MTBE	87.7	12.4	34.3	ND	35.0	3.6	3.5	ND	ND	ND

All values reported in ug/L (ppb)

ND - None Detected

Groundwater Quality Summary
Ray Jacob's (Formerly McGoff's) Sunoco
Barre, Vermont

BTEX and MTBE in MW-7



Monitoring Well 7

PARAMETER	Date of Sample Collection			
	10/7/91	1/8/92	2/10/92	4/3/92
Benzene	ND	9.63	ND	ND
Chlorobenzene	ND	ND	ND	ND
1,2-DCB	ND	ND	ND	ND
1,3-DCB	ND	ND	ND	ND
1,4-DCB	ND	ND	ND	ND
Ethylbenzene	ND	1.21	ND	ND
Toluene	ND	25.7	3.60	TBQ
Xylenes	ND	19.6	ND	ND
Total BTEX	ND	56.1	3.60	TBQ
MTBE	26.9	79.3	84.1	12.4
BTEX+MTBE	26.9	135.4	87.7	12.4

All values reported in ug/L (ppb)

ND - None Detected



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REPORT OF LABORATORY ANALYSIS

CLIENT: Griffin International
PROJECT NAME: McGoffs
REPORT DATE: March 17, 1993
DATE SAMPLED: March 2, 1993

PROJECT CODE: GIMG1272
REF.#: 42,936 - 42,937

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody.

Chain of custody indicated samples were preserved with HCl.

All samples were prepared and analyzed by requirements outlined in the referenced method and within the specified holding times.

All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced method.

Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

Reviewed by,

Harry B. Locker, Ph.D.
Laboratory Director

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoffs
REPORT DATE: March 17, 1993
DATE SAMPLED: March 2, 1993
DATE RECEIVED: March 3, 1993
ANALYSIS DATE: March 15, 1993

PROJECT CODE: GIMG1272
REF.#: 42,936
STATION: Influent
TIME SAMPLED: 12:00
SAMPLER: P. Hack

<u>Parameter</u>	<u>Detection Limit (ug/L)¹</u>	<u>Concentration (ug/L)</u>
Benzene	5	11.1
Chlorobenzene	5	ND ²
1,2-Dichlorobenzene	5	ND
1,3-Dichlorobenzene	5	ND
1,4-Dichlorobenzene	5	ND
Ethylbenzene	5	TBQ ³
Toluene	5	158.
Xylenes	5	101.
MTBE	25	ND

Bromobenzene Surrogate Recovery: 131%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 7

NOTES:

- 1 Detection limit raised due to high levels of contaminants. Sample run at 20% dilution.
- 2 None detected
- 3 Trace below quantitation limit



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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoffs
REPORT DATE: March 17, 1993
DATE SAMPLED: March 2, 1993
DATE RECEIVED: March 3, 1993
ANALYSIS DATE: March 15, 1993

PROJECT CODE: GIMG1272
REF.#: 42,937
STATION: Effluent #1
TIME SAMPLED: 11:58
SAMPLER: P. Hack

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

Bromobenzene Surrogate Recovery: 93%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 1

NOTES:

1 None detected



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REPORT OF LABORATORY ANALYSIS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: March 3, 1993
DATE SAMPLED: February 18, 1993

PROJECT CODE: GIMG1277
REF.#: 42,468 - 42,478

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody.

Chain of custody indicated samples were preserved with HCl.

All samples were prepared and analyzed by requirements outlined in the referenced method and within the specified holding times.

All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced method.

Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

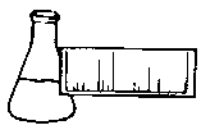
Reviewed by,

Sybil D. L. for Harry B. Locker

Harry B. Locker, Ph.D.
Laboratory Director

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: March 3, 1993
DATE SAMPLED: February 18, 1993
DATE RECEIVED: February 19, 1993
ANALYSIS DATE: March 2, 1993

PROJECT CODE: GIMG1277
REF.#: 42,472
STATION: MW-1
TIME SAMPLED: 11:38
SAMPLER: D. Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

Bromobenzene Surrogate Recovery: 89%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: March 3, 1993
DATE SAMPLED: February 18, 1993
DATE RECEIVED: February 19, 1993
ANALYSIS DATE: March 2, 1993

PROJECT CODE: GIMG1277
REF.#: 42,471
STATION: MW-2
TIME SAMPLED: 11:20
SAMPLER: D. Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

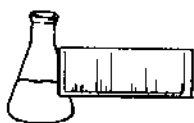
Bromobenzene Surrogate Recovery: 92%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: March 3, 1993
DATE SAMPLED: February 18, 1993
DATE RECEIVED: February 19, 1993
ANALYSIS DATE: March 2, 1993

PROJECT CODE: GIMG1277
REF.#: 42,473
STATION: MW-3
TIME SAMPLED: 11:45
SAMPLER: D. Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)¹</u>	<u>Concentration (ug/L)</u>
Benzene	200	1,010.
Chlorobenzene	200	ND ²
1,2-Dichlorobenzene	200	ND
1,3-Dichlorobenzene	200	ND
1,4-Dichlorobenzene	200	ND
Ethylbenzene	200	725.
Toluene	200	11,500.
Xylenes	200	5,620.
MTBE	1000	ND

Bromobenzene Surrogate Recovery: 95%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 8

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NOTES:

- 1 Detection limit raised due to high levels of contaminants. Sample run at 0.5% dilution.
- 2 None detected



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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: March 3, 1993
DATE SAMPLED: February 18, 1993
DATE RECEIVED: February 19, 1993
ANALYSIS DATE: March 2, 1993

PROJECT CODE: GIMG1277
REF.#: 42,469
STATION: MW-5
TIME SAMPLED: 10:55
SAMPLER: D. Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	TBQ ²

Bromobenzene Surrogate Recovery: 92%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

- 1 None detected
- 2 Trace below quantitation limit

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: March 3, 1993
DATE SAMPLED: February 18, 1993
DATE RECEIVED: February 19, 1993
ANALYSIS DATE: March 2, 1993

PROJECT CODE: GIMG1277
REF.#: 42,470
STATION: MW-6
TIME SAMPLED: 11:15
SAMPLER: D. Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

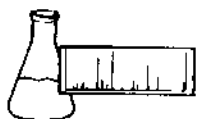
Bromobenzene Surrogate Recovery: 91%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: March 3, 1993
DATE SAMPLED: February 18, 1993
DATE RECEIVED: February 19, 1993
ANALYSIS DATE: March 2, 1993

PROJECT CODE: GIMG1277
REF.#: 42,478
STATION: Carbon Influent
TIME SAMPLED: 12:09
SAMPLER: D. Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)¹</u>	<u>Concentration (ug/L)</u>
Benzene	5	ND ²
Chlorobenzene	5	ND
1,2-Dichlorobenzene	5	ND
1,3-Dichlorobenzene	5	ND
1,4-Dichlorobenzene	5	ND
Ethylbenzene	5	ND
Toluene	5	63.8
Xylenes	5	43.5
MTBE	25	ND

Bromobenzene Surrogate Recovery: 105%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 2

NOTES:

- 1 Detection limit raised due to high levels of contaminants. Sample run at 20% dilution.
- 2 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: March 3, 1993
DATE SAMPLED: February 18, 1993
DATE RECEIVED: February 19, 1993
ANALYSIS DATE: March 2, 1993

PROJECT CODE: GIMG1277
REF.#: 42,477
STATION: Carbon Effluent #1
TIME SAMPLED: 12:05
SAMPLER: D. Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

Bromobenzene Surrogate Recovery: 93%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: March 3, 1993
DATE SAMPLED: February 18, 1993
DATE RECEIVED: February 19, 1993
ANALYSIS DATE: March 2, 1993

PROJECT CODE: GIMG1277
REF.#: 42,476
STATION: Carbon Effluent #2
TIME SAMPLED: 12:02
SAMPLER: D. Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

Bromobenzene Surrogate Recovery: 91%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: March 3, 1993
DATE SAMPLED: February 18, 1993
DATE RECEIVED: February 19, 1993
ANALYSIS DATE: March 2, 1993

PROJECT CODE: GIMG1277
REF.#: 42,475
STATION: Equipment Blank
TIME SAMPLED: 11:47
SAMPLER: D. Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

Bromobenzene Surrogate Recovery: 93%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: March 3, 1993
DATE SAMPLED: February 18, 1993
DATE RECEIVED: February 19, 1993
ANALYSIS DATE: March 2, 1993

PROJECT CODE: GIMG1277
REF.#: 42,474
STATION: Duplicate
TIME SAMPLED: 11:45
SAMPLER: D. Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)¹</u>	<u>Concentration (ug/L)</u>
Benzene	200	1,030.
Chlorobenzene	200	ND ²
1,2-Dichlorobenzene	200	ND
1,3-Dichlorobenzene	200	ND
1,4-Dichlorobenzene	200	ND
Ethylbenzene	200	712.
Toluene	200	11,400.
Xylenes	200	5,510.
MTBE	1000	ND

Bromobenzene Surrogate Recovery: 97%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 8

NOTES:

- 1 Detection limit raised due to high levels of contaminants. Sample run at 0.5% dilution.
2 None detected

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CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: March 3, 1993
DATE SAMPLED: February 18, 1993
DATE RECEIVED: February 19, 1993
ANALYSIS DATE: March 2, 1993

PROJECT CODE: GIMG1277
REF.#: 42,468
STATION: Trip Blank
TIME SAMPLED: 7:40
SAMPLER: D. Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

Bromobenzene Surrogate Recovery: 91%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

RECEIVED 3.10.5 1993

CHAIN-OF-CUSTODY RECORD

Job # 10914132

005852

Project Name: <i>McClus</i>	Reporting Address: <i>Griffin International,</i>	Billing Address:
Site Location: <i>Barre, VT</i>	<i>28 Dorset Lane, Williston, VT 05495</i>	<i>Same</i>
Endyne Project Number: <i>5IMG1297</i>	Contact Name: <i>Don Tourangeau</i>	Sampler Name:
	Company/Phone #: <i>Griffin / 877-7708</i>	Company/Phone #: <i>Same</i>

Lab #	Sample Description	Matrix	Date/Time	Container		Field Results/Remarks	Analysis Required	Sample Preservation	Rush
				No.	Type/Size				
✓ 42468	Trip Blank	100%	7:40	2	40 mL		CO2	HCl	
✓ 42469	MW-5		10:55						
✓ 42470	MW-6		11:15						
✓ 42471	MW-2		11:20						
✓ 42472	MW-1	100%	11:38						
✓ 42473	MW-3	0.5%	11:45						
✓ 42474	Duplicate		11:45						
✓ 42475	Equipment Blank		11:47						
✓ 42476	Carbon Effluent #2		12:02						
✓ 42477	Carbon Effluent #1		12:05						
✓ 42478	Carbon Influent 20%		12:09						

Relinquished by: Signature <i>Ken D. S. McHew</i>	Received by: Signature <i>[Signature]</i>	Date/Time <i>2/19/93 10:10am</i>
Relinquished by: Signature	Received by: Signature	Date/Time

Requested Analyses

1	pH	6	TKN	11	Total Solids	16	Metals ICP/AA	21	EPA 624	26	EPA 8270
2	Chloride	7	Total P	12	TSS	17	Fecal and/or Tot.	22	EPA 625 B/N or A	27	EPA 8010
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	EPA 418.1	28	EPA 8020
4	Nitrite N	9	BOD ₅	14	Turbidity	19	BTEX	24	EPA 608 Pest/PCB	29	EPA 8060
5	Nitrate N	10	Alkalinity	15	Conductivity	20	EPA 601/602	25	EPA 8240	30	EPTOX
31	TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)										
32	Other (Specify):										

LABORATORY: WHITE

PROJECT MANAGER: YELLOW

SAMPLER: PINK



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Laboratory Services

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FAX 879-7103

REPORT OF LABORATORY ANALYSIS

CLIENT: Griffin International
PROJECT NAME: McGoff's
DATE REPORTED: February 23, 1993
DATE SAMPLED: February 4, 1993

PROJECT CODE: GIMG1985
REF. #: 42,058 - 42,060

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody record.

Chain of custody indicated samples were preserved with HCl.

Although EPA Method 602 analysis was requested, due to scheduling constraints the samples were analyzed by equivalent EPA Method 8240.

All samples were prepared and analyzed by requirements outlined in the referenced methods and within the specified holding times.

All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced methods.

Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

Reviewed by,

Harry B. Locker, Ph.D.
Laboratory Director

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LABORATORY REPORT

EPA METHOD 602 -- COMPOUNDS BY EPA METHOD 8240

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: February 23, 1993
SAMPLER: Peter Hack
DATE SAMPLED: February 4, 1993
DATE RECEIVED: February 5, 1993

PROJECT CODE: GIMG1985
ANALYSIS DATE: February 17, 1993
STATION: Influent
REF.#: 42,058
TIME SAMPLED: 8:45

<u>Parameter</u>	<u>Minimum Detection Limit²</u>	<u>Concentration (ug/L)</u>
Benzene	5.	7.5
Chlorobenzene	10.	ND ¹
1,2-Dichlorobenzene	10.	ND
1,3-Dichlorobenzene	10.	ND
1,4-Dichlorobenzene	10.	ND
Ethylbenzene	5.	5.0
Toluene	5.	88.5
Xylenes	15.	79.5
MTBE	15.	38.5

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

Bromofluorobenzene Surrogate Recovery: 91.0%

NOTES:

1 None detected

2 Detection limit raised due to high levels of contaminants. Sample run at 20% dilution.



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LABORATORY REPORT

EPA METHOD 602 -- COMPOUNDS BY EPA METHOD 8240

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: February 23, 1993
SAMPLER: Peter Hack
DATE SAMPLED: February 4, 1993
DATE RECEIVED: February 5, 1993

PROJECT CODE: GIMG1985
ANALYSIS DATE: February 17, 1993
STATION: Effluent #1
REF.#: 42,059
TIME SAMPLED: 8:50

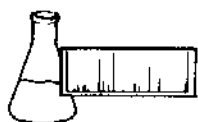
<u>Parameter</u>	<u>Minimum Detection Limit</u>	<u>Concentration (ug/L)</u>
Benzene	1.	ND ¹
Chlorobenzene	2.	ND
1,2-Dichlorobenzene	2.	ND
1,3-Dichlorobenzene	2.	ND
1,4-Dichlorobenzene	2.	ND
Ethylbenzene	1.	ND
Toluene	1.	ND
Xylenes	3.	ND
MTBE	3.	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

Bromofluorobenzene Surrogate Recovery: 114.0%

NOTES:

1 None detected



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LABORATORY REPORT

EPA METHOD 602 -- COMPOUNDS BY EPA METHOD 8240

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: February 23, 1993
SAMPLER: Peter Hack
DATE SAMPLED: February 4, 1993
DATE RECEIVED: February 5, 1993

PROJECT CODE: GIMG1985
ANALYSIS DATE: February 17, 1993
STATION: Effluent #2
REF.#: 42,060
TIME SAMPLED: 8:55

<u>Parameter</u>	<u>Minimum Detection Limit</u>	<u>Concentration (ug/L)</u>
Benzene	1.	ND ¹
Chlorobenzene	2.	ND
1,2-Dichlorobenzene	2.	ND
1,3-Dichlorobenzene	2.	ND
1,4-Dichlorobenzene	2.	ND
Ethylbenzene	1.	ND
Toluene	1.	ND
Xylenes	3.	ND
MTBE	3.	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

Bromofluorobenzene Surrogate Recovery: 96.%

NOTES:

1 None detected

Requested Analyses

SAMPLER: PINK



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Laboratory Services

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REPORT OF LABORATORY ANALYSIS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: February 1, 1993
DATE SAMPLED: January 20, 1993

PROJECT CODE: GIMG1842
REF.#: 41,371 - 41,380

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody.

Chain of custody indicated samples were preserved with HCl.

All samples were prepared and analyzed by requirements outlined in the referenced method and within the specified holding times.

All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced method.

Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

Reviewed by,

Harry B. Locker, Ph.D.
Laboratory Director

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Laboratory Services

32 James Brown Drive
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(802) 879-4333
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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: February 1, 1993
DATE SAMPLED: January 20, 1993
DATE RECEIVED: January 21, 1993
ANALYSIS DATE: January 30, 1993

PROJECT CODE: GIMG1842
REF.#: 41,373
STATION: MW-1
TIME SAMPLED: 11:50
SAMPLER: K. McGraw

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

Bromobenzene Surrogate Recovery: 95%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected



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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: February 1, 1993
DATE SAMPLED: January 20, 1993
DATE RECEIVED: January 21, 1993
ANALYSIS DATE: January 30, 1993

PROJECT CODE: GIMG1842
REF.#: 41,374
STATION: MW-2
TIME SAMPLED: 12:20
SAMPLER: K. McGraw

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

Bromobenzene Surrogate Recovery: 91%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 3

NOTES:

1 None detected



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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: February 1, 1993
DATE SAMPLED: January 20, 1993
DATE RECEIVED: January 21, 1993
ANALYSIS DATE: January 30, 1993

PROJECT CODE: GIMG1842
REF.#: 41,376
STATION: MW-3
TIME SAMPLED: 12:55
SAMPLER: K. McGraw

<u>Parameter</u>	<u>Detection Limit (ug/L)¹</u>	<u>Concentration (ug/L)</u>
Benzene	100	4,890.
Chlorobenzene	100	ND ²
1,2-Dichlorobenzene	100	ND
1,3-Dichlorobenzene	100	ND
1,4-Dichlorobenzene	100	ND
Ethylbenzene	100	1,500.
Toluene	100	22,900.
Xylenes	100	10,300.
MTBE	500	8,320.

Bromobenzene Surrogate Recovery: 97%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 10

NOTES:

1 Detection limit raised due to high levels of contaminants. Sample run at 1% dilution.

2 None detected



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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: February 1, 1993
DATE SAMPLED: January 20, 1993
DATE RECEIVED: January 21, 1993
ANALYSIS DATE: January 30, 1993

PROJECT CODE: GIMG1842
REF.#: 41,372
STATION: MW-5
TIME SAMPLED: 11:15
SAMPLER: K. McGraw

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

Bromobenzene Surrogate Recovery: 83%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected



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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: February 1, 1993
DATE SAMPLED: January 20, 1993
DATE RECEIVED: January 21, 1993
ANALYSIS DATE: January 30, 1993

PROJECT CODE: GIMG1842
REF.#: 41,375
STATION: MW-6
TIME SAMPLED: 12:35
SAMPLER: K. McGraw

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

Bromobenzene Surrogate Recovery: 97%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected



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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: February 1, 1993
DATE SAMPLED: January 20, 1993
DATE RECEIVED: January 21, 1993
ANALYSIS DATE: January 30, 1993

PROJECT CODE: GIMG1842
REF.#: 41,380
STATION: Liquid Phase Carbon Inf
TIME SAMPLED: 13:35
SAMPLER: K. McGraw

<u>Parameter</u>	<u>Detection Limit (ug/L)¹</u>	<u>Concentration (ug/L)</u>
Benzene	5	ND ²
Chlorobenzene	5	ND
1,2-Dichlorobenzene	5	ND
1,3-Dichlorobenzene	5	ND
1,4-Dichlorobenzene	5	ND
Ethylbenzene	5	ND
Toluene	5	74.2
Xylenes	5	48.4
MTBE	25	ND

Bromobenzene Surrogate Recovery: 86%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

- 1 Detection limit raised due to high levels of contaminants. Sample run at 20% dilution.
2 None detected



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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: February 1, 1993
DATE SAMPLED: January 20, 1993
DATE RECEIVED: January 21, 1993
ANALYSIS DATE: January 30, 1993

PROJECT CODE: GIMG1842
REF.#: 41,379
STATION: Liquid Phase Carbon Eff
TIME SAMPLED: 13:30
SAMPLER: K. McGraw

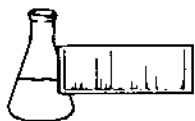
<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

Bromobenzene Surrogate Recovery: 93%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected



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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: February 1, 1993
DATE SAMPLED: January 20, 1993
DATE RECEIVED: January 21, 1993
ANALYSIS DATE: January 30, 1993

PROJECT CODE: GIMG1842
REF.#: 41,378
STATION: Equipment Blank
TIME SAMPLED: 13:20
SAMPLER: K. McGraw

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

Bromobenzene Surrogate Recovery: 80%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected



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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: February 1, 1993
DATE SAMPLED: January 20, 1993
DATE RECEIVED: January 21, 1993
ANALYSIS DATE: January 30, 1993

PROJECT CODE: GIMG1842
REF.#: 41,377
STATION: Duplicate
TIME SAMPLED: 12:55
SAMPLER: K. McGraw

<u>Parameter</u>	<u>Detection Limit (ug/L)¹</u>	<u>Concentration (ug/L)</u>
Benzene	100	6,450.
Chlorobenzene	100	ND ²
1,2-Dichlorobenzene	100	ND
1,3-Dichlorobenzene	100	ND
1,4-Dichlorobenzene	100	ND
Ethylbenzene	100	1,920.
Toluene	100	29,900.
Xylenes	100	13,400.
MTBE	500	7,740.

Bromobenzene Surrogate Recovery: 106%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 10

NOTES:

- 1 Detection limit raised due to high levels of contaminants. Sample run at 1% dilution.
2 None detected



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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: February 1, 1993
DATE SAMPLED: January 20, 1993
DATE RECEIVED: January 21, 1993
ANALYSIS DATE: January 30, 1993

PROJECT CODE: GIMG1842
REF.#: 41,371
STATION: Trip Blank
TIME SAMPLED: 8:00
SAMPLER: K. McGraw

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

Bromobenzene Surrogate Recovery: 89%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected



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EPA METHOD 602 LABORATORY REPORT

MATRIX SPIKE AND DUPLICATE LABORATORY CONTROL DATA

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: February 1, 1993
DATE SAMPLED: January 20, 1993
DATE RECEIVED: January 21, 1993
ANALYSIS DATE: January 30, 1993

PROJECT CODE: GIMG1842
REF.#: 41,375
STATION: MW-6
TIME SAMPLED: 12:35
SAMPLER: K. McGraw

<u>Parameter</u>	<u>Sample(ug/L)</u>	<u>Spike(ug/L)</u>	<u>Dup1(ug/L)</u>	<u>Dup2(ug/L)</u>	<u>Avg % Rec</u>
Benzene	0	10	9.1	9	90%
Toluene	0	10	9.2	9	91%
Ethylbenzene	0	10	9.2	8.9	90%
Xylenes	0	30	26.5	26.4	88%

CHAIN-OF-CUSTODY RECORD

Job# 10914132 00 765

Project Name: McGoff's	Reporting Address: Griffin International, 23 Dorset Lane, Williston, VT	Billing Address: Same
Site Location: Barre, VT	Contact Name: Kevin McGraw	Sampler Name: Same
Endyne Project Number: 6I MB 1842	Company/Phone #: Griffin 1879-7708	Company/Phone #: Same

Lab #	Sample Description	Matrix	Date/ Time	Container		Field Results/Remarks	Analysis Required	Sample Preservation	Rush
				No.	Type/Size				
✓ 41,371	Trip Blank	100% H ₂ O	1/20/93 8:00	2	40mL		60Z	HCl	
✓ 41,372	MW-5		11:15	1					
✓ 41,373	MW-1		11:50						
✓ 41,374	MW-2		12:20						
✓ 41,375	MW-6		12:35						
✓ 41,376	MW-3	1%	12:55			HOT			
✓ 41,377	Duplicate	1%	12:55			HOT			
✓ 41,378	Equipment Blank	100%	13:20						
✓ 41,379	Liquid Phase Carbon Effluent	100%	13:30	✓	✓				
✓ 41,380	Liquid Phase Carbon Influent	20%	13:35	✓	✓				

Relinquished by: Signature <i>[Signature]</i>	Received by: Signature <i>Tonia M. Chambers</i>	Date/Time 1/21/93 1:50
Relinquished by: Signature	Received by: Signature	Date/Time

Requested Analyses

1	pH	6	TKN	11	Total Solids	16	Metals JCP/AA	21	EPA 624	26	EPA 8270
2	Chloride	7	Total P	12	TSS	17	Fecal and/or Tot.	22	EPA 625 B/N or A	27	EPA 8010
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	EPA 418.1	28	EPA 8020
4	Nitrite N	9	BOD ₅	14	Turbidity	19	BTEX	24	EPA 606 Pest/PCB	29	EPA 8060
5	Nitrate N	10	Alkalinity	15	Conductivity	20	EPA 601/602	25	EPA 8240	30	EPTOX
31	TCCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)										
32	Other (Specify):										



ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
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FAX 879-7103

REPORT OF LABORATORY ANALYSIS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: December 31, 1992
DATE SAMPLED: December 18, 1992

PROJECT CODE: GIMG1749
REF.#: 40,134 - 40,143

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody.

Chain of custody indicated samples were preserved with HCl.

All samples were prepared and analyzed by requirements outlined in the referenced method and within the specified holding times.

All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced method.

Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

Reviewed by,

Harry Locker, Ph.D.
Laboratory Director

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Laboratory Services

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: December 31, 1992
DATE SAMPLED: December 17, 1992
DATE RECEIVED: December 18, 1992
ANALYSIS DATE: December 30, 1992

PROJECT CODE: GIMG1749
REF.#: 40,139
STATION: MW-1
TIME SAMPLED: 13:45
SAMPLER: Kevin McGraw

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

Bromobenzene Surrogate Recovery: 89%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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Laboratory Services

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: December 31, 1992
DATE SAMPLED: December 17, 1992
DATE RECEIVED: December 18, 1992
ANALYSIS DATE: December 30, 1992

PROJECT CODE: GIMG1749
REF.#: 40,140
STATION: MW-2
TIME SAMPLED: 14:05
SAMPLER: Kevin McGraw

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	5.1

Bromobenzene Surrogate Recovery: 89%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 6

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: December 31, 1992
DATE SAMPLED: December 17, 1992
DATE RECEIVED: December 18, 1992
ANALYSIS DATE: December 30, 1992

PROJECT CODE: GIMG1749
REF.#: 40,138
STATION: MW-3
TIME SAMPLED: 13:15
SAMPLER: Kevin McGraw

<u>Parameter</u>	<u>Detection Limit (ug/L)¹</u>	<u>Concentration (ug/L)</u>
Benzene	100	237.
Chlorobenzene	100	ND ²
1,2-Dichlorobenzene	100	ND
1,3-Dichlorobenzene	100	ND
1,4-Dichlorobenzene	100	ND
Ethylbenzene	100	TBQ ³
Toluene	100	3,120.
Xylenes	100	2,000.
MTBE	500	3,410.

Bromobenzene Surrogate Recovery: 95%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 5

NOTES:

- 1 Detection limit raised due to high levels of contaminants. Sample run at 1% dilution.
- 2 None detected
- 3 Trace below quantitation limit

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: December 31, 1992
DATE SAMPLED: December 17, 1992
DATE RECEIVED: December 18, 1992
ANALYSIS DATE: December 30, 1992

PROJECT CODE: GIMG1749
REF.#: 40,137
STATION: MW-5
TIME SAMPLED: 11:50
SAMPLER: Kevin McGraw

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	TBQ ²

Bromobenzene Surrogate Recovery: 92%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

- 1 None detected
- 2 Trace below quantitation limit

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: December 31, 1992
DATE SAMPLED: December 17, 1992
DATE RECEIVED: December 18, 1992
ANALYSIS DATE: December 31, 1992

PROJECT CODE: GIMG1749
REF.#: 40,141
STATION: MW-6
TIME SAMPLED: 14:25
SAMPLER: Kevin McGraw

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

Bromobenzene Surrogate Recovery: 92%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: December 31, 1992
DATE SAMPLED: December 17, 1992
DATE RECEIVED: December 18, 1992
ANALYSIS DATE: December 31, 1992

PROJECT CODE: GIMG1749
REF.#: 40,143
STATION: Equipment Blank
TIME SAMPLED: 14:45
SAMPLER: Kevin McGraw

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

Bromobenzene Surrogate Recovery: 95%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: December 31, 1992
DATE SAMPLED: December 17, 1992
DATE RECEIVED: December 18, 1992
ANALYSIS DATE: December 31, 1992

PROJECT CODE: GIMG1749
REF.#: 40,142
STATION: Duplicate
TIME SAMPLED: 14:25
SAMPLER: Kevin McGraw

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

Bromobenzene Surrogate Recovery: 94%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: December 31, 1992
DATE SAMPLED: December 17, 1992
DATE RECEIVED: December 18, 1992
ANALYSIS DATE: December 30, 1992

PROJECT CODE: GIMG1749
REF.#: 40,134
STATION: Trip Blank
TIME SAMPLED: 8:00
SAMPLER: Kevin McGraw

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

Bromobenzene Surrogate Recovery: 90%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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EPA METHOD 602 LABORATORY REPORT

MATRIX SPIKE AND DUPLICATE LABORATORY CONTROL DATA

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: January 4, 1993
DATE SAMPLED: December 17, 1992
DATE RECEIVED: December 18, 1992
ANALYSIS DATE: December 30, 1992

PROJECT CODE: GIMG1749
REF.#: 40,135
STATION: Liquid Phase Carbon Eff.
TIME SAMPLED: 10:25
SAMPLER: Kevin McGraw

<u>Parameter</u>	<u>Sample(ug/L)</u>	<u>Spike(ug/L)</u>	<u>Dup 1(ug/L)</u>	<u>Dup 2(ug/L)</u>	<u>Avg % Recovery</u>
Benzene	0	10	10.5	12.5	112.
Toluene	0	10	10.9	12.8	119.
Ethylbenzene	0	10	10.6	12.5	116.
Xylenes	0	30	33.4	39.4	121.

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: December 31, 1992
DATE SAMPLED: December 17, 1992
DATE RECEIVED: December 18, 1992
ANALYSIS DATE: December 30, 1992

PROJECT CODE: GIMG1749
REF.#: 40,136
STATION: Liquid Phase Carbon Inf.
TIME SAMPLED: 10:30
SAMPLER: Kevin McGraw

<u>Parameter</u>	<u>Detection Limit (ug/L)¹</u>	<u>Concentration (ug/L)</u>
Benzene	5	TBQ ²
Chlorobenzene	5	ND ³
1,2-Dichlorobenzene	5	ND
1,3-Dichlorobenzene	5	ND
1,4-Dichlorobenzene	5	ND
Ethylbenzene	5	ND
Toluene	5	118.
Xylenes	5	67.1
MTBE	25	39.1

Bromobenzene Surrogate Recovery: 103%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 2

NOTES:

- 1 Detection limit raised due to high levels of contaminants. Sample run at 20% dilution.
- 2 Trace below quantitation limit
- 3 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: December 31, 1992
DATE SAMPLED: December 17, 1992
DATE RECEIVED: December 18, 1992
ANALYSIS DATE: December 30, 1992

PROJECT CODE: GIMG1749
REF.#: 40,135
STATION: Liquid Phase Carbon Eff.
TIME SAMPLED: 10:25
SAMPLER: Kevin McGraw

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

Bromobenzene Surrogate Recovery: 91%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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CHAIN-OF-CUSTODY RECORD

Job# 10914132

005558

Project Name: <i>McGoff's</i>	Reporting Address: <i>Griffin Int'l, 23 Dorset Lane,</i>	Billing Address: <i>same</i>
Site Location: <i>Barre, VT</i>	<i>Williston, VT 05495</i>	
Endyne Project Number: <i>6211749</i>	Contact Name: <i>Kevin McGraw</i>	Sampler Name: <i>Kevin McGraw</i>
	Company/Phone #: <i>Griffin/879-7708</i>	Company/Phone #: <i>Griffin/879-7708</i>

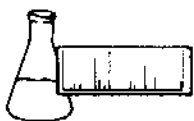
[illegible]

Relinquished by: Signature <i>[Signature]</i>	Received by: Signature <i>[Signature]</i>	Date/Time 12/18/92 12:00 noon
Relinquished by: Signature	Received by: Signature	Date/Time

Requested Analyses

Requested Analyses											
1	pH	6	TKN	11	Total Solids	16	Metals IC/AA	21	EPA 624	26	EPA 8270
2	Chloride	7	Total P	12	TSS	17	Fecal and/or Tot.	22	EPA 625 B/N or A	27	EPA 8010
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	EPA 418.1	28	EPA 8020
4	Nitrite N	9	BOD ₅	14	Turbidity	19	BTEX	24	EPA 608 Pb/C/PCB	29	EPA 8090
5	Nitrate N	10	Alkalinity	15	Conductivity	20	EPA 601/602	25	EPA 8240	30	EPTOX
31	TCLP (Specific volatiles, semi-volatiles, metals, pesticides, herbicides)										
32	Other (Specify):										

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REPORT OF LABORATORY ANALYSIS

CLIENT: Griffin International
PROJECT NAME: McGoffs Sunoco
REPORT DATE: December 20, 1992
DATE SAMPLED: December 7, 1992

PROJECT CODE: GIMG1595
REF.#: 39,514 - 39,516

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody.

Chain of custody indicated samples were preserved with HCl.

All samples were prepared and analyzed by requirements outlined in the referenced method and within the specified holding times.

All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced method.

Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

Reviewed by,

Harry Locker, Ph.D.
Laboratory Director

enclosures

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoffs Sunoco
REPORT DATE: December 20, 1992
DATE SAMPLED: December 7, 1992
DATE RECEIVED: December 7, 1992
ANALYSIS DATE: December 20, 1992

PROJECT CODE: GIMG1595
REF.#: 39,516
STATION: Carbon Influent
TIME SAMPLED: 10:11
SAMPLER: D. Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)¹</u>	<u>Concentration (ug/L)</u>
Benzene	5	5.1
Chlorobenzene	5	ND ²
1,2-Dichlorobenzene	5	ND
1,3-Dichlorobenzene	5	ND
1,4-Dichlorobenzene	5	ND
Ethylbenzene	5	ND
Toluene	5	151.
Xylenes	5	87.1
MTBE	25	TBQ ³

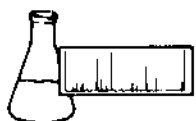
Bromobenzene Surrogate Recovery: 114%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 2

NOTES:

- 1 Detection limit raised due to high levels of contaminants. Sample run at 20% dilution.
- 2 None detected
- 3 Trace below quantitation limit

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoffs Sunoco
REPORT DATE: December 20, 1992
DATE SAMPLED: December 7, 1992
DATE RECEIVED: December 7, 1992
ANALYSIS DATE: December 19, 1992

PROJECT CODE: GIMG1595
REF.#: 39,515
STATION: Carbon Effluent #1
TIME SAMPLED: 10:07
SAMPLER: D. Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	10.4

Bromobenzene Surrogate Recovery: 80%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoffs Sunoco
REPORT DATE: December 20, 1992
DATE SAMPLED: December 7, 1992
DATE RECEIVED: December 7, 1992
ANALYSIS DATE: December 19, 1992

PROJECT CODE: GIMG1595
REF.#: 39,514
STATION: Carbon Effluent #2
TIME SAMPLED: 10:04
SAMPLER: D. Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	TBQ ²

Bromobenzene Surrogate Recovery: 82%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

2 Trace below quantitation limit

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CHAIN-OF-CUSTODY RECORD

005748

Project Name: <i>Richmond Harbor</i>	Reporting Address: <i>GRiffin</i>	Billing Address: <i>GRiffin</i>
Site Location: <i>Grande</i>	Contact Name: <i>CHRIS HILL</i>	Sampler Name: <i>Don Townsend</i>
Endyne Project Number: <i>61MG1595</i>	Company/Phone #: <i>879-7708</i>	Company/Phone #: <i>879-7708</i>

[illegible]

Relinquished by: Signature <i>[Signature]</i>	Received by: Signature <i>[Signature]</i>	Date/Time 12/7/92 1:35 pm
Relinquished by: Signature	Received by: Signature	Date/Time

Requested Analyses

Requested Analyses											
1	pH	6	TKN	11	Total Solids	16	Metals ACP/AA	21	EPA 624	26	EPA 821
2	Chloride	7	Total P	12	TSS	17	Fecal and/or Tot.	22	EPA 625 B/N or A	27	EPA 8010
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	EPA 418.1	28	EPA 8020
4	Nitrite N	9	BOD ₅	14	Turbidity	19	BTEX	24	EPA 608 Pests/PCB	29	EPA 8080
5	Nitrate N	10	Alkalinity	15	Conductivity	20	EPA 601/602	25	EPA 8240	30	EPTOX
31	TCLP (Specific volatiles, semi-volatiles, metals, pesticides, herbicides)										
32	Other (Specify):										



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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: November 30, 1992
SAMPLER: Kevin McGraw
DATE SAMPLED: November 13, 1992
DATE RECEIVED: November 13, 1992

PROJECT CODE: GIMG1575
ANALYSIS DATE: November 23, 1992
STATION: MW-1
REF.#: 38,657
TIME SAMPLED: 10:45

<u>Parameter</u>	<u>Minimum Detection Limit</u>	<u>Concentration (ug/L)</u>
Benzene	1.	ND ¹
Chlorobenzene	2.	ND
1,2-Dichlorobenzene	2.	ND
1,3-Dichlorobenzene	2.	ND
1,4-Dichlorobenzene	2.	ND
Ethylbenzene	1.	ND
Toluene	1.	ND
Xylenes	1.	ND
MTBE	1.	4.8

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: November 30, 1992
SAMPLER: Kevin McGraw
DATE SAMPLED: November 13, 1992
DATE RECEIVED: November 13, 1992

PROJECT CODE: GIMG1575
ANALYSIS DATE: November 23, 1992
STATION: MW-2
REF.#: 38,659
TIME SAMPLED: 12:20

<u>Parameter</u>	<u>Minimum Detection Limit</u>	<u>Concentration (ug/L)</u>
Benzene	1.	ND ¹
Chlorobenzene	2.	ND
1,2-Dichlorobenzene	2.	ND
1,3-Dichlorobenzene	2.	ND
1,4-Dichlorobenzene	2.	ND
Ethylbenzene	1.	ND
Toluene	1.	ND
Xylenes	1.	ND
MTBE	1.	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 3

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: November 30, 1992
SAMPLER: Kevin McGraw
DATE SAMPLED: November 13, 1992
DATE RECEIVED: November 13, 1992

PROJECT CODE: GIMG1575
ANALYSIS DATE: November 24, 1992
STATION: MW-3
REF.#: 38,661
TIME SAMPLED: 13:10

<u>Parameter</u>	<u>Minimum Detection Limit²</u>	<u>Concentration (ug/L)</u>
Benzene	100.	150.
Chlorobenzene	200.	ND ¹
1,2-Dichlorobenzene	200.	ND
1,3-Dichlorobenzene	200.	ND
1,4-Dichlorobenzene	200.	ND
Ethylbenzene	100.	220.
Toluene	100.	1,440.
Xylenes	100.	2,690.
MTBE	100.	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 11

NOTES:

- 1 None detected
- 2 Detection limit raised due to high levels of contaminants. Sample run at 1% dilution.

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: November 30, 1992
SAMPLER: Kevin McGraw
DATE SAMPLED: November 13, 1992
DATE RECEIVED: November 13, 1992

PROJECT CODE: GIMG1575
ANALYSIS DATE: November 23, 1992
STATION: MW-5
REF.#: 38,658
TIME SAMPLED: 11:40

<u>Parameter</u>	<u>Minimum Detection Limit</u>	<u>Concentration (ug/L)</u>
Benzene	1.	1.1
Chlorobenzene	2.	ND ¹
1,2-Dichlorobenzene	2.	ND
1,3-Dichlorobenzene	2.	ND
1,4-Dichlorobenzene	2.	ND
Ethylbenzene	1.	ND
Toluene	1.	TBQ ²
Xylenes	1.	2.0
MTBE	1.	13.6

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

- 1 None detected
- 2 Trace below quantitation limit

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: November 30, 1992
SAMPLER: Kevin McGraw
DATE SAMPLED: November 13, 1992
DATE RECEIVED: November 13, 1992

PROJECT CODE: GIMG1575
ANALYSIS DATE: November 24, 1992
STATION: MW-6
REF.#: 38,660
TIME SAMPLED: 12:45

<u>Parameter</u>	<u>Minimum Detection Limit</u>	<u>Concentration (ug/L)</u>
Benzene	1.	ND ¹
Chlorobenzene	2.	ND
1,2-Dichlorobenzene	2.	ND
1,3-Dichlorobenzene	2.	ND
1,4-Dichlorobenzene	2.	ND
Ethylbenzene	1.	ND
Toluene	1.	ND
Xylenes	1.	ND
MTBE	1.	3.5

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International

PROJECT NAME: McGoff's

REPORT DATE: November 30, 1992

SAMPLER: Kevin McGraw

DATE SAMPLED: November 13, 1992

DATE RECEIVED: November 13, 1992

PROJECT CODE: GIMG1575

ANALYSIS DATE: November 24, 1992

STATION: Carbon Influent

REF.#: 38,665

TIME SAMPLED: 13:40

<u>Parameter</u>	<u>Minimum Detection Limit²</u>	<u>Concentration (ug/L)</u>
Benzene	5.	20.5
Chlorobenzene	10.	ND ¹
1,2-Dichlorobenzene	10.	ND
1,3-Dichlorobenzene	10.	ND
1,4-Dichlorobenzene	10.	ND
Ethylbenzene	5.	5.5
Toluene	5.	166.
Xylenes	5.	98.0
MTBE	5.	6.0

NUMBER OF UNIDENTIFIED PEAKS FOUND: 2

NOTES:

1 None detected

2 Detection limit raised due to high levels of contaminants. Sample run at 20% dilution.

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: November 30, 1992
SAMPLER: Kevin McGraw
DATE SAMPLED: November 13, 1992
DATE RECEIVED: November 13, 1992

PROJECT CODE: GIMG1575
ANALYSIS DATE: November 24, 1992
STATION: Carbon Effluent
REF.#: 38,664
TIME SAMPLED: 13:30

<u>Parameter</u>	<u>Minimum Detection Limit</u>	<u>Concentration (ug/L)</u>
Benzene	1.	ND ¹
Chlorobenzene	2.	ND
1,2-Dichlorobenzene	2.	ND
1,3-Dichlorobenzene	2.	ND
1,4-Dichlorobenzene	2.	ND
Ethylbenzene	1.	ND
Toluene	1.	ND
Xylenes	1.	ND
MTBE	1.	4.7

NUMBER OF UNIDENTIFIED PEAKS FOUND: 1

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: November 30, 1992
SAMPLER: Kevin McGraw
DATE SAMPLED: November 13, 1992
DATE RECEIVED: November 13, 1992

PROJECT CODE: GIMG1575
ANALYSIS DATE: November 23, 1992
STATION: Trip Blank
REF.#: 38,656
TIME SAMPLED: 7:30

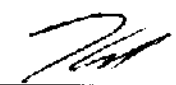
<u>Parameter</u>	<u>Minimum Detection Limit</u>	<u>Concentration (ug/L)</u>
Benzene	1.	ND ¹
Chlorobenzene	2.	ND
1,2-Dichlorobenzene	2.	ND
1,3-Dichlorobenzene	2.	ND
1,4-Dichlorobenzene	2.	ND
Ethylbenzene	1.	ND
Toluene	1.	ND
Xylenes	1.	ND
MTBE	1.	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: November 30, 1992
SAMPLER: Kevin McGraw
DATE SAMPLED: November 13, 1992
DATE RECEIVED: November 13, 1992

PROJECT CODE: GIMG1575
ANALYSIS DATE: November 24, 1992
STATION: Equipment Blank
REF.#: 38,663
TIME SAMPLED: 13:25

<u>Parameter</u>	<u>Minimum Detection Limit</u>	<u>Concentration (ug/L)</u>
Benzene	1.	ND ¹
Chlorobenzene	2.	ND
1,2-Dichlorobenzene	2.	ND
1,3-Dichlorobenzene	2.	ND
1,4-Dichlorobenzene	2.	ND
Ethylbenzene	1.	ND
Toluene	1.	ND
Xylenes	1.	ND
MTBE	1.	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: November 30, 1992
SAMPLER: Kevin McGraw
DATE SAMPLED: November 13, 1992
DATE RECEIVED: November 13, 1992

PROJECT CODE: GIMG1575
ANALYSIS DATE: November 24, 1992
STATION: Duplicate
REF.#: 38,662
TIME SAMPLED: 13:10

<u>Parameter</u>	<u>Minimum Detection Limit²</u>	<u>Concentration (ug/L)</u>
Benzene	100.	150.
Chlorobenzene	200.	ND ¹
1,2-Dichlorobenzene	200.	ND
1,3-Dichlorobenzene	200.	ND
1,4-Dichlorobenzene	200.	ND
Ethylbenzene	100.	210.
Toluene	100.	1,190.
Xylenes	100.	2,230.
MTBE	100.	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 12

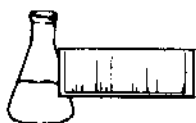
NOTES:

1 None detected

2 Detection limit raised due to high levels of contaminants. Sample run at 1% dilution.

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International

PROJECT NAME: McGoffs

REPORT DATE: November 20, 1992

SAMPLER: Peter Murray

DATE SAMPLED: Not Indicated (10/30/92)

DATE RECEIVED: November 2, 1992

PROJECT CODE: GIMC1431

ANALYSIS DATE: November 13, 1992

STATION: Carbon Influent

REF.#: 38,047

TIME SAMPLED: 14:55

<u>Parameter</u>	<u>Minimum Detection Limit²</u>	<u>Concentration (ug/L)</u>
Benzene	5.	20.5
Chlorobenzene	10.	ND ¹
1,2-Dichlorobenzene	10.	ND
1,3-Dichlorobenzene	10.	ND
1,4-Dichlorobenzene	10.	ND
Ethylbenzene	5.	5.5
Toluene	5.	127.
Xylenes	5.	87.5
MTBE	5.	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 2

NOTES:

1 None detected

2 Detection limit raised due to high levels of contaminants. Sample run at 20% dilution.

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoffs
REPORT DATE: November 20, 1992
SAMPLER: Peter Murray
DATE SAMPLED: Not Indicated
DATE RECEIVED: November 2, 1992

PROJECT CODE: GIMC1431
ANALYSIS DATE: November 13, 1992
STATION: Carbon Effluent
REF.#: 38,046
TIME SAMPLED: 14:54

<u>Parameter</u>	<u>Minimum Detection Limit</u>	<u>Concentration (ug/L)</u>
Benzene	1.	ND ¹
Chlorobenzene	2.	ND
1,2-Dichlorobenzene	2.	ND
1,3-Dichlorobenzene	2.	ND
1,4-Dichlorobenzene	2.	ND
Ethylbenzene	1.	ND
Toluene	1.	ND
Xylenes	1.	ND
MTBE	1.	2.2

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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Requested Analyses

SAMPLER: PINK



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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: October 28, 1992
DATE SAMPLED: October 13, 1992
DATE RECEIVED: October 13, 1992
ANALYSIS DATE: October 27, 1992

PROJECT CODE: GIMS1458
REF.#: 37,052
STATION: Carbon Influent
TIME SAMPLED: 10:24
SAMPLER: Don Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)¹</u>	<u>Concentration (ug/L)</u>
Benzene	5	28.9
Chlorobenzene	10	ND ²
1,2-Dichlorobenzene	10	ND
1,3-Dichlorobenzene	10	ND
1,4-Dichlorobenzene	10	ND
Ethylbenzene	5	ND
Toluene	5	125.
Xylenes	5	67.7
MTBE	25	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

- 1 Detection limit raised due to high levels of contaminants. Sample run at 20% dilution.
2 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: October 28, 1992
DATE SAMPLED: October 13, 1992
DATE RECEIVED: October 13, 1992
ANALYSIS DATE: October 27, 1992

PROJECT CODE: GIMS1458
REF.#: 37,051
STATION: Carbon Eff #1
TIME SAMPLED: 10:20
SAMPLER: Don Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	1.4
Chlorobenzene	2	ND ¹
1,2-Dichlorobenzene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	TBQ ²

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

2 Trace below quantitation limit

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's
REPORT DATE: October 28, 1992
DATE SAMPLED: October 13, 1992
DATE RECEIVED: October 13, 1992
ANALYSIS DATE: October 28, 1992

PROJECT CODE: GIMS1458
REF.#: 37,050
STATION: Carbon Eff #2
TIME SAMPLED: 10:17
SAMPLER: Don Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	1.3
Chlorobenzene	2	ND ¹
1,2-Dichlorobenzene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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CHAIN-OF-CUSTODY RECORD

0055

Project Name: Site Location:			Reporting Address:			Billing Address:			
Endyne Project Number:			Contact Name: Company/Phone #:			Sampler Name: Company/Phone #:			
Lab #	Sample Description	Matrix	Date/ Time	Container		Field Results/Remarks	Analysis Required	Sample Preservation	Rush
				No.	Type/Size				
Relinquished by: Signature			Received by: Signature			Date/Time			
Relinquished by: Signature			Received by: Signature			Date/Time			

Requested Analyses

[illegible]

LABORATORY: WHITE

PROJECT MANAGER: YELLOW

SAMPLER: PINK



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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's Sunoco
REPORT DATE: October 16, 1992
DATE SAMPLED: October 2, 1992
DATE RECEIVED: October 2, 1992
ANALYSIS DATE: October 16, 1992

PROJECT CODE: GIMG1342
REF.#: 36,438
STATION: MW #1
TIME SAMPLED: 10:15
SAMPLER: Don Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	2	ND
1,2-Dichlorobenzene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's Sunoco
REPORT DATE: October 16, 1992
DATE SAMPLED: October 2, 1992
DATE RECEIVED: October 2, 1992
ANALYSIS DATE: October 16, 1992

PROJECT CODE: GIMG1342
REF.#: 36,441
STATION: MW #2
TIME SAMPLED: 11:50
SAMPLER: Don Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	2	ND
1,2-Dichlorobenzene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
Ethylbenzene	1	ND
Toluene	1	6.8
Xylenes	1	20.8
MTBE	5	25.7

NUMBER OF UNIDENTIFIED PEAKS FOUND: 11

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's Sunoco
REPORT DATE: October 16, 1992
DATE SAMPLED: October 2, 1992
DATE RECEIVED: October 2, 1992
ANALYSIS DATE: October 15, 1992

PROJECT CODE: GIMG1342
REF.#: 36,442
STATION: MW #3
TIME SAMPLED: 12:13
SAMPLER: Don Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)¹</u>	<u>Concentration (ug/L)</u>
Benzene	100	543.
Chlorobenzene	200	ND ²
1,2-Dichlorobenzene	200	ND
1,3-Dichlorobenzene	200	ND
1,4-Dichlorobenzene	200	ND
Ethylbenzene	100	730.
Toluene	100	5,010.
Xylenes	100	6,820.
MTBE	500	TBQ ³

NUMBER OF UNIDENTIFIED PEAKS FOUND: 7

NOTES:

- 1 Detection limit raised due to high levels of contaminants. Sample run at 1% dilution.
- 2 None detected
- 3 Trace below quantitation limit

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's Sunoco
REPORT DATE: October 16, 1992
DATE SAMPLED: October 2, 1992
DATE RECEIVED: October 2, 1992
ANALYSIS DATE: October 16, 1992

PROJECT CODE: GIMG1342
REF.#: 36,440
STATION: MW #4
TIME SAMPLED: 11:10
SAMPLER: Don Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)¹</u>	<u>Concentration (ug/L)</u>
Benzene	100	6,560.
Chlorobenzene	200	ND ²
1,2-Dichlorobenzene	200	ND
1,3-Dichlorobenzene	200	ND
1,4-Dichlorobenzene	200	ND
Ethylbenzene	100	2,900.
Toluene	100	22,300.
Xylenes	100	20,200.
MTBE	500	727.

NUMBER OF UNIDENTIFIED PEAKS FOUND: 16

NOTES:

- 1 Detection limit raised due to high levels of contaminants. Sample run at 1% dilution.
- 2 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's Sunoco
REPORT DATE: October 16, 1992
DATE SAMPLED: October 2, 1992
DATE RECEIVED: October 2, 1992
ANALYSIS DATE: October 16, 1992

PROJECT CODE: GIMG1342
REF.#: 36,439
STATION: MW #5
TIME SAMPLED: 10:45
SAMPLER: Don Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	2	ND
1,2-Dichlorobenzene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	12.5

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's Sunoco
REPORT DATE: October 16, 1992
DATE SAMPLED: October 2, 1992
DATE RECEIVED: October 2, 1992
ANALYSIS DATE: October 16, 1992

PROJECT CODE: GIMG1342
REF.#: 36,443
STATION: MW #6
TIME SAMPLED: 12:40
SAMPLER: Don Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	3.6
Chlorobenzene	2	ND ¹
1,2-Dichlorobenzene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	TBQ ²

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

- 1 None detected
- 2 Trace below quantitation limit

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's Sunoco
REPORT DATE: October 16, 1992
DATE SAMPLED: October 2, 1992
DATE RECEIVED: October 2, 1992
ANALYSIS DATE: October 15, 1992

PROJECT CODE: GIMG1342
REF.#: 36,448
STATION: Carbon Influent
TIME SAMPLED: 13:05
SAMPLER: Don Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)¹</u>	<u>Concentration (ug/L)</u>
Benzene	5	36.9
Chlorobenzene	10	ND ²
1,2-Dichlorobenzene	10	ND
1,3-Dichlorobenzene	10	ND
1,4-Dichlorobenzene	10	ND
Ethylbenzene	5	ND
Toluene	5	184.
Xylenes	5	109.
MTBE	25	TBQ ³

NUMBER OF UNIDENTIFIED PEAKS FOUND: 2

NOTES:

- 1 Detection limit raised due to high levels of contaminants. Sample run at 20% dilution.
- 2 None detected
- 3 Trace below quantitation limit

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's Sunoco
REPORT DATE: October 16, 1992
DATE SAMPLED: October 2, 1992
DATE RECEIVED: October 2, 1992
ANALYSIS DATE: October 16, 1992

PROJECT CODE: GIMG1342
REF.#: 36,447
STATION: Carbon Effluent #1
TIME SAMPLED: 13:00
SAMPLER: Don Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	2	ND
1,2-Dichlorobenzene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's Sunoco
REPORT DATE: October 16, 1992
DATE SAMPLED: October 2, 1992
DATE RECEIVED: October 2, 1992
ANALYSIS DATE: October 16, 1992

PROJECT CODE: GIMG1342
REF.#: 36,446
STATION: Carbon Effluent #2
TIME SAMPLED: 12:55
SAMPLER: Don Tourangeau

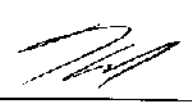
<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	2	ND
1,2-Dichlorobenzene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's Sunoco
REPORT DATE: October 16, 1992
DATE SAMPLED: October 2, 1992
DATE RECEIVED: October 2, 1992
ANALYSIS DATE: October 15, 1992

PROJECT CODE: GIMG1342
REF.#: 36,445
STATION: Duplicate
TIME SAMPLED: 11:10
SAMPLER: Don Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)¹</u>	<u>Concentration (ug/L)</u>
Benzene	100	6,430.
Chlorobenzene	200	ND ²
1,2-Dichlorobenzene	200	ND
1,3-Dichlorobenzene	200	ND
1,4-Dichlorobenzene	200	ND
Ethylbenzene	100	2,870.
Toluene	100	24,000.
Xylenes	100	19,800.
MTBE	500	650.

NUMBER OF UNIDENTIFIED PEAKS FOUND: 16

NOTES:

- 1 Detection limit raised due to high levels of contaminants. Sample run at 1% dilution.
2 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's Sunoco
REPORT DATE: October 16, 1992
DATE SAMPLED: October 2, 1992
DATE RECEIVED: October 2, 1992
ANALYSIS DATE: October 16, 1992

PROJECT CODE: GIMG1342
REF.#: 36,444
STATION: Equipment Blank
TIME SAMPLED: 12:50
SAMPLER: Don Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	2	ND
1,2-Dichlorobenzene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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(802) 879-4333
FAX 879-7103

LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's Sunoco
REPORT DATE: October 16, 1992
DATE SAMPLED: October 2, 1992
DATE RECEIVED: October 2, 1992
ANALYSIS DATE: October 16, 1992

PROJECT CODE: GIMG1342
REF.#: 36,437
STATION: Trip Blank
TIME SAMPLED: 7:55
SAMPLER: Don Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	2	ND
1,2-Dichlorobenzene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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CHAIN-OF-CUSTODY RECORD

005515

Project Name: <i>Mill Creek</i>	Reporting Address: <i>Griffin</i>	Billing Address: <i>Griffin</i>
Site Location: <i>Bridge</i>	Contact Name: <i>Chris</i>	Sampler Name: <i>Chris</i>
Endyne Project Number:	Company/Phone #: <i>802-879-4333</i>	Company/Phone #: <i>802-879-4333</i>

Lab #	Sample Description	Matrix	Date/Time	Container		Field Results/Remarks	Analysis Required	Sample Preservation	Rush
				No.	Type/Size				
	TRIP BLANK	W	07:55	2	40ml		20	100	
	Mix #1		10:15						
	Mix #5		10:45						
	Mix #4		11:10			NOT			
	Mix #2		11:50						
	Mix #3		12:13						
	Mix #6		12:40						
	Equine Blank		12:50						
	Bottom 20		13:10			NOT			
	Gravel 20ml - #2		13:55						
	Gravel 20ml - #1		13:00						
	Gravel 20ml - #3		13:05						

Relinquished by: Signature <i>[Signature]</i>	Received by: Signature <i>[Signature]</i>	Date/Time <i>10/2/92</i>
Relinquished by: Signature	Received by: Signature	Date/Time

Requested Analyses

1	pH	6	TKN	11	Total Solids	16	Metals ICP/AA	21	EPA 624	26	EPA 8270
2	Chloride	7	Total P	12	TSS	17	Focal and/or Tot.	22	EPA 625 B/N or A	27	EPA 8010
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	EPA 418.1	28	EPA 8020
4	Nitrite N	9	BOD ₅	14	Turbidity	19	BTEX	24	EPA 606 Pest/PCB	29	EPA 8080
5	Nitrate N	10	Alkalinity	15	Conductivity	20	EPA 601/602	25	EPA 8240	30	EPTOX
31	TCPLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)										
32	Other (Specify):										

LABORATORY: WHITE

PROJECT MANAGER: YELLOW

SAMPLER: PINK



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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoffs
REPORT DATE: October 2, 1992
DATE SAMPLED: September 18, 1992
DATE RECEIVED: September 18, 1992
ANALYSIS DATE: September 30, 1992

PROJECT CODE: GIMG1221
REF.#: 35,949
STATION: Liquid Phase Carbon Inf.
TIME SAMPLED: 13:45
SAMPLER: Peter Murray

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	23.6
Chlorobenzene	2	ND ¹
1,2-Dichlorobenzene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
Ethylbenzene	1	5.5
Toluene	1	99.5
Xylenes	1	70.3
MTBE	5	15.0

NUMBER OF UNIDENTIFIED PEAKS FOUND: 7

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoffs
REPORT DATE: October 2, 1992
DATE SAMPLED: September 18, 1992
DATE RECEIVED: September 18, 1992
ANALYSIS DATE: September 30, 1992

PROJECT CODE: GIMG1221
REF.#: 35,950
STATION: Liquid Phase Carbon Eff.
TIME SAMPLED: 13:50
SAMPLER: Peter Murray

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	2	ND
1,2-Dichlorobenzene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	16.3

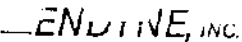
NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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CHAIN-OF-CUSTODY RECORD

004770

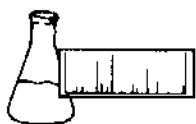
Requested Analyses

[illegible]

LABORATORY: WHITE

PROJECT MANAGER: YELLOW

SAMPLER: PINK



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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's Sunoco
REPORT DATE: September 14, 1992
DATE SAMPLED: August 31, 1992
DATE RECEIVED: September 1, 1992
ANALYSIS DATE: September 10, 1992

PROJECT CODE: GIMG1107
REF.#: 35,124
STATION: MW #1
TIME SAMPLED: 12:55
SAMPLER: Don Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	2	ND
1,2-Dichlorobenzene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's Sunoco
REPORT DATE: September 14, 1992
DATE SAMPLED: August 31, 1992
DATE RECEIVED: September 1, 1992
ANALYSIS DATE: September 10, 1992

PROJECT CODE: GIMG1107
REF.#: 35,120
STATION: MW #2
TIME SAMPLED: 11:05
SAMPLER: Don Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	2	ND
1,2-Dichlorobenzene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	5.1

NUMBER OF UNIDENTIFIED PEAKS FOUND: 1

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's Sunoco
REPORT DATE: September 14, 1992
DATE SAMPLED: August 31, 1992
DATE RECEIVED: September 1, 1992
ANALYSIS DATE: September 10, 1992

PROJECT CODE: GIMG1107
REF.#: 35,121
STATION: MW #3
TIME SAMPLED: 11:30
SAMPLER: Don Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)¹</u>	<u>Concentration (ug/L)</u>
Benzene	100	3,080.
Chlorobenzene	200	ND ²
1,2-Dichlorobenzene	200	ND
1,3-Dichlorobenzene	200	ND
1,4-Dichlorobenzene	200	ND
Ethylbenzene	100	753.
Toluene	100	9,500.
Xylenes	100	5,310.
MTBE	500	510.

NUMBER OF UNIDENTIFIED PEAKS FOUND: 9

NOTES:

- 1 Detection limit raised due to high levels of contaminants. Sample run at 1% dilution.
2 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's Sunoco
REPORT DATE: September 14, 1992
DATE SAMPLED: August 31, 1992
DATE RECEIVED: September 1, 1992
ANALYSIS DATE: September 11, 1992

PROJECT CODE: GIMG1107
REF.#: 35,123
STATION: MW #4
TIME SAMPLED: 12:16
SAMPLER: Don Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)¹</u>	<u>Concentration (ug/L)</u>
Benzene	100	6,060.
Chlorobenzene	200	ND ²
1,2-Dichlorobenzene	200	ND
1,3-Dichlorobenzene	200	ND
1,4-Dichlorobenzene	200	ND
Ethylbenzene	100	1,090.
Toluene	100	13,900.
Xylenes	100	7,760.
MTBE	500	594.

NUMBER OF UNIDENTIFIED PEAKS FOUND: 13

NOTES:

- 1 Detection limit raised due to high levels of contaminants. Sample run at 1% dilution.
2 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's Sunoco
REPORT DATE: September 14, 1992
DATE SAMPLED: August 31, 1992
DATE RECEIVED: September 1, 1992
ANALYSIS DATE: September 12, 1992

PROJECT CODE: GIMG1107
REF.#: 35,122
STATION: MW #5
TIME SAMPLED: 11:52
SAMPLER: Don Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	2	ND
1,2-Dichlorobenzene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's Sunoco
REPORT DATE: September 14, 1992
DATE SAMPLED: August 31, 1992
DATE RECEIVED: September 1, 1992
ANALYSIS DATE: September 10, 1992

PROJECT CODE: GIMG1107
REF.#: 35,119
STATION: MW #6
TIME SAMPLED: 10:40
SAMPLER: Don Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	5.1
Chlorobenzene	2	ND ¹
1,2-Dichlorobenzene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
Ethylbenzene	1	ND
Toluene	1	20.5
Xylenes	1	9.4
MTBE	5	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 2

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's Sunoco
REPORT DATE: September 14, 1992
DATE SAMPLED: August 31, 1992
DATE RECEIVED: September 1, 1992
ANALYSIS DATE: September 11, 1992

PROJECT CODE: GIMG1107
REF.#: 35,125
STATION: Duplicate
TIME SAMPLED: 12:16
SAMPLER: Don Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)¹</u>	<u>Concentration (ug/L)</u>
Benzene	100	8,010.
Chlorobenzene	200	ND ²
1,2-Dichlorobenzene	200	ND
1,3-Dichlorobenzene	200	ND
1,4-Dichlorobenzene	200	ND
Ethylbenzene	100	1,250.
Toluene	100	16,600.
Xylenes	100	9,270.
MTBE	500	913.

NUMBER OF UNIDENTIFIED PEAKS FOUND: 13

NOTES:

- 1 Detection limit raised due to high levels of contaminants. Sample run at 1% dilution.
2 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's Sunoco
REPORT DATE: September 14, 1992
DATE SAMPLED: August 31, 1992
DATE RECEIVED: September 1, 1992
ANALYSIS DATE: September 10, 1992

PROJECT CODE: GIMG1107
REF.#: 35,126
STATION: Equipment Blank
TIME SAMPLED: 13:05
SAMPLER: Don Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	2	ND
1,2-Dichlorobenzene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's Sunoco
REPORT DATE: September 14, 1992
DATE SAMPLED: August 31, 1992
DATE RECEIVED: September 1, 1992
ANALYSIS DATE: September 10, 1992

PROJECT CODE: GIMG1107
REF.#: 35,115
STATION: Trip Blank
TIME SAMPLED: 7:45
SAMPLER: Don Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	2	ND
1,2-Dichlorobenzene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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CHAIN-OF-CUSTODY RECORD

004190

Project Name: <i>Mill Pond</i>	Reporting Address: <i>6th St</i>	Billing Address: <i>6th St</i>
Site Location: <i>Williston</i>	Contact Name: <i>Chris Hill</i>	Sampler Name: <i>Kathleen McNamee</i>
Endyne Project Number:	Company/Phone #: <i>879-7788</i>	Company/Phone #: <i>879-7788</i>

Lab #	Sample Description	Matrix	Date/Time	Container		Field Results/Remarks	Analysis Required	Sample Preservation	Rush
				No.	Type/Size				
	<i>Area #6</i>	<i>W</i>	<i>11:10</i>	<i>2</i>	<i>40 mL</i>		<i>70</i>	<i>1100</i>	
	<i>Area #2</i>	<i>W</i>	<i>11:15</i>	<i>2</i>	<i>40 mL</i>		<i>70</i>	<i>1100</i>	
	<i>Area #3</i>	<i>W</i>	<i>11:30</i>	<i>2</i>	<i>40 mL</i>		<i>70</i>	<i>1100</i>	
	<i>Area #5</i>	<i>W</i>	<i>11:52</i>	<i>2</i>	<i>40 mL</i>		<i>70</i>	<i>1100</i>	
	<i>Area #4</i>	<i>W</i>	<i>12:16</i>	<i>2</i>	<i>40 mL</i>		<i>70</i>	<i>1100</i>	
	<i>Area #1</i>	<i>W</i>	<i>12:55</i>	<i>2</i>	<i>40 mL</i>		<i>70</i>	<i>1100</i>	
	<i>Refrigerator</i>	<i>W</i>	<i>12:16</i>	<i>2</i>	<i>40 mL</i>		<i>70</i>	<i>1100</i>	
	<i>Environmental Records</i>	<i>W</i>	<i>12:05</i>	<i>2</i>	<i>40 mL</i>		<i>70</i>	<i>1100</i>	

Relinquished by: Signature <i>[Signature]</i>	Received by: Signature <i>[Signature]</i>	Date/Time <i>7/1/02 4:45 PM</i>
Relinquished by: Signature	Received by: Signature	Date/Time

Requested Analyses

1	pH	6	TKN	11	Total Solids	16	Metals ICP/AA	21	EPA 624	26	EPA 8270
2	Chloride	7	Total P	12	TSS	17	Fecal and/or Tot.	22	EPA 625 B/N or A	27	EPA 8010
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	EPA 418.1	28	EPA 8020
4	Nitrite N	9	BOD ₅	14	Turbidity	19	BTEX	24	EPA 608 Pest/PCB	29	EPA 8060
5	Nitrate N	10	Alkalinity	15	Conductivity	20	EPA 601/602	25	EPA 8240	30	EPTOX
31	TCRP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)										
32	Other (Specify):										



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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's Sunoco
REPORT DATE: September 14, 1992
DATE SAMPLED: August 31, 1992
DATE RECEIVED: September 1, 1992
ANALYSIS DATE: September 13, 1992

PROJECT CODE: GIMG1107
REF.#: 35,118
STATION: Carbon Influent
TIME SAMPLED: 11:12
SAMPLER: Don Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	66.7
Chlorobenzene	2	ND ¹
1,2-Dichlorobenzene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
Ethylbenzene	1	10.0
Toluene	1	246.
Xylenes	1	125.
MTBE	5	19.7

NUMBER OF UNIDENTIFIED PEAKS FOUND: 9

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's Sunoco
REPORT DATE: September 14, 1992
DATE SAMPLED: August 31, 1992
DATE RECEIVED: September 1, 1992
ANALYSIS DATE: September 10, 1992

PROJECT CODE: GIMG1107
REF.#: 35,117
STATION: Carbon Effluent #1
TIME SAMPLED: 11:09
SAMPLER: Don Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	2	ND
1,2-Dichlorobenzene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoff's Sunoco
REPORT DATE: September 14, 1992
DATE SAMPLED: August 31, 1992
DATE RECEIVED: September 1, 1992
ANALYSIS DATE: September 10, 1992

PROJECT CODE: GIMG1107
REF.#: 35,116
STATION: Carbon Effluent #2
TIME SAMPLED: 11:07
SAMPLER: Don Tourangeau

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	2	ND
1,2-Dichlorobenzene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoffs
REPORT DATE: September 9, 1992
SAMPLER: Don Tourangeau
DATE SAMPLED: August 21, 1992
DATE RECEIVED: August 21, 1992

PROJECT CODE: GIMG1024
ANALYSIS DATE: September 1, 1992
STATION: Carbon Influent
REF.#: 34,701
TIME SAMPLED: 14:06

<u>Parameter</u>	<u>Minimum Detection Limit²</u>	<u>Concentration (ug/L)</u>
Benzene	10.	165.
Chlorobenzene	20.	ND ¹
1,2-Dichlorobenzene	20.	ND
1,3-Dichlorobenzene	20.	ND
1,4-Dichlorobenzene	20.	ND
Ethylbenzene	10.	34.
Toluene	10.	570.
Xylenes	10.	264.
MTBE	10.	69.

NUMBER OF UNIDENTIFIED PEAKS FOUND: 2

NOTES:

1 None detected

2 Detection limit raised due to high levels of contaminants. Sample run at 10% dilution.

Reviewed by _____



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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoffs
REPORT DATE: September 9, 1992
SAMPLER: Don Tourangeau
DATE SAMPLED: August 21, 1992
DATE RECEIVED: August 21, 1992

PROJECT CODE: GIMG1024
ANALYSIS DATE: September 1, 1992
STATION: Carbon Effluent #1
REF.#: 34,700
TIME SAMPLED: 14:04

<u>Parameter</u>	<u>Minimum Detection Limit</u>	<u>Concentration (ug/L)</u>
Benzene	1.	ND ¹
Chlorobenzene	2.	ND
1,2-Dichlorobenzene	2.	ND
1,3-Dichlorobenzene	2.	ND
1,4-Dichlorobenzene	2.	ND
Ethylbenzene	1.	ND
Toluene	1.	TBQ ²
Xylenes	1.	ND
MTBE	1.	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 1

NOTES:

- 1 None detected
- 2 Trace below quantitation limit

Reviewed by _____



ENDYNE, INC.

Laboratory Services

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(802) 879-4333
FAX 879-7103

LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: McGoffs
REPORT DATE: September 9, 1992
SAMPLER: Don Tourangeau
DATE SAMPLED: August 21, 1992
DATE RECEIVED: August 21, 1992

PROJECT CODE: GIMG1024
ANALYSIS DATE: September 1, 1992
STATION: Carbon Effluent #2
REF.#: 34,699
TIME SAMPLED: 14:02

<u>Parameter</u>	<u>Minimum Detection Limit</u>	<u>Concentration (ug/L)</u>
Benzene	1.	ND ¹
Chlorobenzene	2.	ND
1,2-Dichlorobenzene	2.	ND
1,3-Dichlorobenzene	2.	ND
1,4-Dichlorobenzene	2.	ND
Ethylbenzene	1.	ND
Toluene	1.	ND
Xylenes	1.	ND
MTBE	1.	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 2

NOTES:

1 None detected

RECEIVED SEP 11 1992

Reviewed by

004183

Requested Analyses

LABORATORY: WHITE

PROJECT MANAGER: YELLOW

SAMPLER: FINK